

A225 673

# **SUBCONTRACTING MANAGEMENT HANDBOOK**

**FIRST EDITION — 1988**

**DEFENSE SYSTEMS MANAGEMENT COLLEGE  
FORT BELVOIR, VIRGINIA**

## PREFACE

With increasing weapon system complexity and sophistication, prime contractors must invariably rely on more and more subcontractor support to provide the needed skills, capabilities, or products with which to produce such weapons. A number of studies and reports, over the past years, have indicated that the cost and amount of the subcontracted portion of many weapon system acquisitions have become equal to or greater than that of the prime contractors. As these percentages have continued to increase, prime contractors have indicated that they are also experiencing significant cost and schedule difficulties that are attributable to or are the result of subcontractors' problems.

In discussing subcontractor control, as related to the above acquisition environment, DoD Manual 4245.7-M<sup>1</sup> states that more emphasis on effective management of subcontractors is clearly needed within industry and in the Government's management of prime contractors if there is to be a smooth tran-

sition to production. To ensure the timely acquisition and deployment of highly reliable and effective weapon systems, however, one must address subcontracting issues throughout the acquisition and deployment phases. This can be accomplished by the Government promoting and facilitating successful prime contractor interactions with subcontractors without impinging on the privity of the contracts between the prime and the subcontractors. Unlike the concept of subcontract management that is primarily concerned with contractor procurement systems, this concept of intensified Government activity is referred to as subcontracting management and encompasses the functions of planning and management of key aspects of subcontracted efforts, through enhanced Government coordination and interaction with prime contractors.

### REFERENCE

1/ DoD Manual 4245.7-M, "Transition from Development to Production," September 1985, p. 5.14



Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

## TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NO.</u>
<b>1.0 INTRODUCTION</b>	1-1
1.1 Purpose	1-1
1.2 Discussion	1-1
1.3 Handbook Organization	1-2
1.4 Terms Usage	1-3
1.5 Reference Citations	1-3
<b>2.0 SUBCONTRACTING MANAGEMENT PERSPECTIVE</b>	2-1
2.1 Background	2-1
2.2 The Process and Its Complexities	2-1
2.3 Legislation and Regulations	2-3
2.4 Risk Management and Good Business	2-3
2.5 CAS Components Descriptions and Differences	2-3
2.6 Interorganizational Transfers	2-8
2.7 Subcontracting Management vs. System Life Cycle	2-9
2.8 Subcontracting Management Education	2-9
<b>3.0 SUBCONTRACTING MANAGEMENT CONCEPT, ENVIRONMENT AND TECHNIQUES</b>	3-1
3.1 Need for Subcontracting Management	3-1
3.2 Regulatory Basis	3-1
3.3 Environment and Techniques	3-2
<b>4.0 ACQUISITION MANAGEMENT</b>	4-1
4.1 Weapon System Acquisition Life Cycle Phases	4-1
4.2 Subcontracting Management Functions by Phases	4-3
<b>5.0 ACQUISITION STRATEGY</b>	5-1
5.1 Acquisition Strategy and Planning	5-1
5.2 Acquisition Plan	5-1
5.3 Non-Development Items (NDIs)	5-4
<b>6.0 COMPETITION</b>	6-1
6.1 Competition Planning and Requirements for Selecting Prime Contractors	6-1
6.2 Sub-Tier Competition	6-3
6.3 Subcontracting Source Selection	6-3
<b>7.0 CAPITAL INVESTMENT</b>	7-1
7.1 Discussion	7-1
7.2 Manufacturing Technology (MANTECH)	7-1

## TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NO.</u>
7.3 Industrial Modernization Incentives Program (IMIP)_____	7-2
<b>8.0 PMO AND CAS TEAM APPROACH_____</b>	<b>8-1</b>
8.1 Program Support_____	8-1
8.2 MOAs and Delegation Letters_____	8-2
8.3 Defense Priorities and Allocations System (DPAS)_____	8-5
8.4 Problem Identification, Resolution, and Status Reporting_____	8-6
8.5 Cost and Price Review of Subcontractor Proposals_____	8-7
8.6 Technical Review of Subcontractor Proposals_____	8-8
<b>9.0 CRITICAL SUBCONTRACTING ASPECTS_____</b>	<b>9-1</b>
9.1 Source Selection_____	9-1
9.2 Flowdown of Specifications, Standards Terms and Conditions_____	9-1
9.3 Make-or-Buy Program_____	9-2
9.4 Interorganizational Transfers_____	9-3
9.5 Subcontract Competition_____	9-3
9.6 Rights in Technical Data and Computer Software_____	9-4
9.7 Patent Rights_____	9-5
9.8 Subcontract Management Plan_____	9-6
9.9 Subcontracting Plan (Small Business and Small Disadvantaged Business)_____	9-7
9.10 Labor Surplus Subcontracting Program_____	9-7
9.11 Equal Employment Opportunity (EEO) Clearance_____	9-8
9.12 Subcontract Kickbacks_____	9-8
9.13 Progress Payments_____	9-9
9.14 Termination Settlements_____	9-9
9.15 Subcontractor Program Status Report_____	9-10
<b>10.0 CRITICAL ACQUISITION ASPECTS_____</b>	<b>10-1</b>
10.1 Surveillance_____	10-1
10.2 Quality Assurance_____	10-2
10.3 Vendor Quality Surveys_____	10-3
10.4 Component Breakout_____	10-4
10.5 Leadtime Analysis_____	10-5
10.6 Source and Receiving Inspection and Test_____	10-6

## TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NO.</u>
10.7 Vendor Change Control_____	10-7
10.8 Design Engineering Management_____	10-8
10.9 Vendor Performance Rating System_____	10-9
10.10 Software Management Surveillance_____	10-10
10.11 Government Property_____	10-10
10.12 Integrated Logistic Support (ILS)_____	10-11
<b>11.0 CRITICAL TESTS &amp; REVIEWS_____</b>	<b>11-1</b>
11.1 Consent Reviews of Subcontracting_____	11-1
11.2 Contractor Purchasing System Reviews_____	11-1
11.3 Cost/Schedule Control System Criteria (C/SCSC)_____	11-2
11.4 Cost Monitoring Reviews (CMRs)_____	11-3
11.5 Vendor Functional and Physical Configuration Audits_____	11-3
11.6 Vendor Preliminary and Critical Design Reviews_____	11-4
11.7 Manufacturing Management and Production Capability Reviews_____	11-5
11.8 Subcontractor Manufacturing Reviews and Assessments_____	11-5
<b>APPENDIX A. ACRONYMS AND TERMS_____</b>	<b>A-1</b>
<b>APPENDIX B. MEMORANDUM OF AGREEMENT (MOA) GENERIC EXAMPLE_____</b>	<b>B-1</b>
<b>APPENDIX C. SUBCONTRACT FLOW DOWN CLAUSES FEDERAL ACQUISITION REGULA- TION (FAR)_____</b>	<b>C-1</b>
<b>APPENDIX D. MASTER BIBLIOGRAPHY_____</b>	<b>D-1</b>

### LIST OF FIGURES

<u>FIGURE</u>	<u>PAGE NO.</u>
1-1 Subcontract Commitments_____	1-2
2-1 Typical Defense Contract Administration Services Management Area (DCASMA) Organization_____	2-5
2-2 Typical Defense Contract Administration Services Plant Representative Office (DCASPRO)_____	2-5

## TABLE OF CONTENTS

<u>FIGURE</u>	<u>LIST OF FIGURES</u>	<u>PAGE NO.</u>
2-3	Air Force Plant Representative Office (AFPRO)_____	2-6
2-4	Army Plant Representative Office (ARPRO)_____	2-6
2-5	Naval Plant Representative Office (NAVPRO)_____	2-7
3-1	Government and DoD Functional Guidance Related to Subcontracting Management_____	3-3
3-2	Air Force Functional Guidance Related to Subcontracting Management_____	3-4
3-3	Army Functional Guidance Related to to Subcontracting Management_____	3-5
3-4	Navy Functional Guidance Related to Subcontracting Management_____	3-6
4-1	Acquisition Program Review Milestones for DAB Programs_____	4-2
4-2	Subcontractor Involvement by Acquisition Phase_____	4-4
5-1	Example of Varying Degrees of NDIs_____	5-5
7-1	IMIP and Program Baseline Adjustments_____	7-3
8-1	Sample Letter of Delegation_____	8-4

## CHAPTER 1.0

### INTRODUCTION

#### 1.1 PURPOSE

The purpose of this handbook is to provide a ready reference on subcontracting management, for use by Department of Defense (DoD) joint and single service acquisition Program Management Offices' (PMOs) staffs, Contract Administration Offices' (CAOs) personnel, and Defense Systems Management College (DSMC) students and faculty. The handbook discusses relevant policies, procedures, responsibilities, as well as recommended approaches to subcontracting management, based on an evaluation of guidance provided by the Services.

It is assumed that personnel utilizing this handbook have a basic understanding of DoD's and the applicable Service acquisition processes and procedures.

#### 1.2 DISCUSSION

DoD Directive 5000.1, "Major and Non-Major Defense Acquisition Programs," 1 September 1987 and DoD Instruction 5000.2, "Defense Acquisition Program Procedures," 1 September 1987, provide the primary policies, procedures and management guidance for both major and non-major defense acquisition programs. As stated in DoDD 5000.1,<sup>1/</sup> Program Managers (PMs) are responsible for managing their programs in a manner that is consistent with and supportive of, the policies and practices contained in the directive. The policies include the PM's responsibility for managing his/her defense acquisition program in a timely, efficient and effective manner. All three Services emphasize and delineate the PM's responsibilities in this regard.<sup>2/3/4/</sup> In addition, the Defense Systems Management College (DSMC) has developed a Program Manager's Notebook<sup>5/</sup> that is designed to provide system acquisition participants, and especially Program

Managers with a ready reference document on relevant subjects pertaining to the acquisition of major and non-major weapon systems. This handbook supplements the information in the DSMC Program Manager's Notebook by discussing the concept of subcontracting management as it relates to the weapon system acquisition process. Further, this handbook emphasizes the need for the PM and the PM Office (PMO) staff to be aware of all critical aspects of their program's acquisition process with increased attention to the efforts of subcontractors.

Fact Sheet 6.2.8 (July 1985) of the DSMC Program Manager's Notebook cites the significant growth of subcontracted effort from twenty (20) to sixty (60) percent of the prime contract value during the twenty (20) year period from 1965 to 1985. Similarly, DoD Manual 4245.7-M<sup>6/</sup> noted that: "the percentage of major weapon systems that are subcontracted has grown, reaching as much as eighty (80) percent in some cases." This increase in subcontracted effort represents a considerable commitment of acquisition dollars. According to DoD's Directorate for Information Operations and Reports (DIOR), 1,353 prime contractors reported that in Fiscal Year 1986 they had 52.898 billion dollars in military subcontract commitments. See Figure 1-1 for the growth in subcontracted dollars over a recent ten years period.<sup>7/</sup>

Concern was expressed in both the notebook and manual cited above regarding the need for more management attention to this increasingly vital and critical aspect of weapon system acquisition programs.

"The increased dollar value of subcontracts has been accompanied by a need for additional integration and control of the prime and subcontractors activities, together with a need for program manager in-

FISCAL YEAR	NUMBER OF PRIME CONTRACTORS REPORTING	SUBCONTRACT COMMITMENTS <sup>a</sup>
1977	737	\$ 15.038
1978	810	17.482
1979	832	21.499
1980	1,023	25.245
1981	1,133	33.937
1982	1,170	35.329
1983	1,173	39.796
1984	1,208	47.582
1985	1,205	54.494
1986	1,353	52.898

<sup>a</sup>Amounts in Billion Dollars.

Figure 1-1. Subcontract Commitments <sup>2/</sup>

involvement in the decision-making process that influences system cost, schedule, and technical performance" - Fact Sheet 6 2 8 (July 1985)<sup>5/</sup>

\*\*\*

"Clearly, the effective management of subcontractors needs more emphasis within industry and in the Government's management of prime contractors" - Subcontractor Control Area of Risk,<sup>6/</sup>

Accordingly, this concept of subcontracting management has been developed to meet this need for intensified Government attention to the planning and management of key aspects of subcontracted efforts, through enhanced Government coordination and interaction with prime contractors. This increased activity is and must be accomplished without interfering with the privity of the prime and subcontractors' contractual relationship.

The "Privity of Contract" is defined as the legal relationship between two parties of the same contract. The Government has "privity of contract" with the prime contractor. The prime contractor has "privity of contract" with their subcon-

tractors. Therefore, the Government's relationship with subcontractors is indirect in nature. Government involvement with subcontractors must be channeled through prime contractor directed activities. Thus, only the prime contractor is normally authorized to direct their subcontractors, and the Government (Program Manager) is precluded from directing a subcontractor's efforts, unless specific authority is included in the prime and subcontract.<sup>8/</sup>

The concept of subcontracting management is achieved through the efforts of the PM, the PMO staff, and with the coordination and expert support of the Defense Contract Administration Services (DCAS), the applicable Service Plant Representative Offices (PROs), and the Procuring Contracting Officers (PCOs).

### 1.3 HANDBOOK ORGANIZATION

Chapter 2.0 provides a perspective or overview of subcontracting management. Chapter 3.0 discusses the need for increased management attention to the area of subcontracting as well as the Government's regulatory foundation for the concept. Included in Section 3.3 of

the Chapter is an introduction into the environment and techniques discussed in the subsequent chapters of the handbook. Footnotes and bibliographies are cited at the end of chapters. In addition, there are four appendices: Appendix A provides a listing of acronyms and a selection of terms used in the handbook, Appendix B contains a generic example of a Memorandum of Agreement (MOA), Appendix C contains a listing of recommended subcontract flowdown FAR clauses, and Appendix D presents a master listing of all bibliographies referenced in the handbook.

#### 1.4 TERMS USAGE

Generic terms such as Program Manager (PM) and Program Management Office (PMO) are used throughout this handbook and it should be understood that the terms imply Service peculiar terms, such as the Air Force's System Program Manager (SPM) and System Program Office (SPO). There will be exceptions when referenced material is quoted or reproduced as in the case of Appendix B.

#### 1.5 REFERENCE CITATIONS

Directives cited in the text, References and Footnotes, and in Appendix C were effective at the time this handbook was developed. Readers should verify the currency of directives, instructions, regulations and other references cited throughout this handbook prior to actual use.

#### REFERENCES AND FOOTNOTES:

1/ DoDD 3000.1, "Major and Non-Major Defense Acquisition Programs," 1 September 1987 Section F 6

2/ Air Force Reg 800-2, "Acquisition Program Management," 16 September 1985 Section 5 (With Change 2 of 9 June 1986 and Supplement 1 of 8 August 1986)

3/ DARCOM Reg 11-16, "Program/Project/Product Management," 11 August 1977 (With Change 1 of 3 April 1979) Chapter 4

4/ AMC/TRADOC Pam 70-2, "Materiel Acquisition Handbook," 1987 Chapter 1

5/ DSMC, "The Program Manager's Notebook," October 1985

6/ DoD Manual 4245 7-M, "Transition from Development to Production," September 1985, p 5-12

7/ DoD DIOR, "Prime Contract Awards - First Half Fiscal Year 1987," Report P03 p 69 AD-A182 257

8/ DSMC, "The Program Manager's Notebook," October 1985 Fact Sheet 6 2 8 (July 1985)

## CHAPTER 2.0

### SUBCONTRACTING MANAGEMENT PERSPECTIVE

#### 2.1 BACKGROUND

Subcontracting management was often relegated to a "No-Man's land" in the acquisition process, primarily because it was so easy for each command or office to truly feel that it was someone else's responsibility. Many times this attitude was fostered, at least within the Government, by the view that because of the lack of "privity of contract" between the Government and subcontractors, there must exist a hands off situation. Privity of contract simply means that no direct contractual relationship exists between the Government and the subcontractors. However, the Government has the responsibility for managing taxpayer funds and taking all practical measures to ensure successful contract completion. This includes ensuring that prime contractors manage their subcontracts in an equally responsible manner. Since the prime contractor is paid to manage his subcontractors, the Government should not and does not duplicate their effort. In this regard, there are several critical terms which, although they seem to be commonly understood, need to be defined as to how they are used in this handbook. These critical terms are:

- CONTRACT
- SUBCONTRACT
- SUBCONTRACT MANAGEMENT
- SUBCONTRACTING MANAGEMENT

The Federal Acquisition Regulation (FAR) provides the definitions for the first two items which are:

**CONTRACT:** "... a mutually binding legal relationship obligating the seller to furnish the supplies or services (including construction) and the buyer to pay for them. It includes all types of commitments that obligate the Government to an expenditure of appro-

riated funds and that, except as otherwise authorized, are in writing . . .<sup>1/</sup>

**SUBCONTRACT:** "... means any contract as defined in Subpart 2.1 entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract . . .<sup>2/</sup>

**SUBCONTRACT MANAGEMENT:** A function which is primarily concerned with Contractor purchasing system review, make or buy program analysis and monitoring, subcontract plan management, and consent to subcontract award activities.

**SUBCONTRACTING MANAGEMENT:** "A concept which addresses subcontracting issues and the Government's role in ensuring successful prime contractor interaction with subcontractors in order to satisfy prime contract requirements . . .<sup>3/</sup>

The point to be emphasized is that SUBCONTRACTING MANAGEMENT focuses on the Government's efforts to ensure that the Prime contractor executes his responsibilities in managing his subcontractors.

#### 2.2 THE PROCESS AND ITS COMPLEXITIES

The subcontracting process involves a series of agreements between buyers and sellers which ultimately support the contract between the Government and the prime contractor. These agreements carry with them a series of shifting responsibilities wherein a privity of contract only exists between adjacent organizations, and the Government, for example, has no contractual arrangement with any subcontractor. Even though no contractual relationship exists except at adjacent levels, each activity bears the responsibility for the *ultimate* performance of the prime and all lower level subcontractors. Since no privity of contract exists among the Government and subcontractors, the prime contractor is compensated to perform that

management function. However, the Government then must ensure that the prime contractor exercises adequate control over the subcontractors so that the prime's contractual requirements as well as those of the Government are met adequately and in a timely manner.

Part 44 of the Federal Acquisition Regulation (FAR) provides the policies and procedures dealing with two major areas. The first is "Consent to subcontract," and the second deals with the review, evaluation and approval of contractors' purchasing systems.

The phrase, "Consent to subcontract," as defined in the FAR means "...the contracting officer's written consent for the prime contractor to enter into a particular subcontract"<sup>4/</sup>

Consent to subcontract is required as specified in FAR 44.201-1. These provisions provide for the contracting officer to review the subcontracts proposed by the prime contractor and to "consent" to their placement. Consent in the absence of statements to the contrary, does not constitute approval of the subcontract terms and conditions, prime, or allowability of costs. Consent is required based upon factors such as contract type, dollar value, lack of protection of the Government interest by competition, and work complexity. The consent to subcontract is required under the following circumstances:

- For fixed-price prime contracts (FAR 44.201-1)
  - if the contractor does not have an approved purchasing system.
  - if the prime contract contains FAR clause 52.244-1, Subcontracts Under Fixed-Price Contracts.
- For cost-reimbursement and letter prime contracts (FAR 44.201-2)
  - if the subcontracts are for special test equipment
- For other prime contracts (FAR 44.201-3)
  - if the subcontracts are under time-and-material contracts for other than the purchase of raw material or commercial off-the-shelf stock items.

In the acquisition of major systems, subsystems, or their components, even though the contractor has an approved purchasing system, consent is required for (1) cost-reimbursement, time-and-materials, or labor-hour subcontracts and (2) fixed-price subcontracts, the amounts of which shall be the greater of the small purchase limitation (\$25,000)(FAR 13) or 5 percent of the total estimated cost of the prime contract. (FAR 44.201-2(d)). In addition, even though consent may not be required by virtue of an approved purchasing system and contract type, a contract may be designated by the contracting office as requiring special surveillance under FAR 44.205 and the DoD FAR Supplement (DFARS) 44.304.

The evaluation of the contractor's purchasing system is accomplished by conducting a Contractor Purchasing System Review (CPSR). This detailed review, which is normally performed by the Contract Administration Services (CAS), provides the basis for granting, withholding or withdrawing approval of the contractor's purchasing system. It is critical for a contractor to establish and maintain an approved purchasing system. The CPSR program is discussed in Chapter 8.0, Surveillance.

The management of subcontracts requires the involvement and commitment of the Government Program Office, procuring activity, the Contract Administration Services (CAS) component, the prime contractor, and all subcontractors. The fact that there exist a "funneling" of contractual relationships, (Government to prime, and prime to subcontractors) makes the

process of subcontracting management very complex.

### 2.3 LEGISLATION AND REGULATIONS

The basic regulatory guidance on subcontracting and related issues is found in the FAR/DFARS, and DAR Supplement 1, "Contractor Purchasing System Review (CPSR) Program." The following FAR/DFARS parts and section form the key elements of subcontracting:

<u>FAR/DFARS</u>	<u>TITLE</u>
3.502	Subcontractor Kick backs
7	Acquisition Planning
15.7	Make-or-Buy Programs
15.806	Subcontract Pricing
19	Small Business and Small and Disadvantaged Business Concerns
20	Labor Surplus Area Concerns
27	Patent and Data Rights
34	Major System Acquisition
35	Research and Development Contracting
42	Contract Administration
43	Contract Modifications
44	Subcontracting Policies and Procedures
45.3	Providing Government Property to Subcontractors
52.244	Subcontract Clauses
53.301	Standard Forms

It must be remembered that the Contracting Officer has a wide latitude in strengthening subcontract-related reporting when critical visibility into a prime contractor's subcontract management is required to ensure the interests of the Government are well protected.

### 2.4 RISK MANAGEMENT AND GOOD BUSINESS

As the technical efforts of subcontractors continue to increase in scope and volume,

as well as dollar value, the DoD acquisition community is directing more and more attention to this vital aspect of major weapon procurements. This increased attention is achieved without impinging on the privity of contract between the prime contractor and first-tier subcontractors, or between sub-tier subcontractors. By enhanced management attention to the responsibilities and actions of the prime contractor, the Government can reduce the risks involved in the subcontracted activities of the acquisition process. Risk management is essential to good business management, and subcontracting management is an essential component of risk management and the acquisition strategy for a viable program.

### 2.5 CAS COMPONENTS DESCRIPTIONS AND DIFFERENCES

As of 31 July 1987, there are five (5) groups of DoD Contract Administration Services (CAS) components: (1) Defense Contract Administration Services (DCAS), (2) Army, (3) Navy, (4) Air Force and (5) Defense Fuel Supply Center (DFSC) - Defense Logistics Agency (DLA). The largest of these organizations, is DCAS, and the smallest is DFSC-DLA. In terms of offices the breakdown is as follows:

#### DCAS:

9	Region (DCASR) HQs
38	Management Area (DCASMA) Offices
47	Plant Representative Offices (DCASPROs)

#### ARMY:

4	Commands
4	Contracting Centers/Agencies
3	Plant Representative Offices (ARPROs)

#### NAVY:

15	Plant Representative Offices (NAVPROs)
15	Superintendent of Shipbuilding (SUPSHIPS) Offices

**AIR FORCE:**

- 23 Plant Representative Offices (AFPROs)
- 8 Contract Maintenance Center Detachments (AFCMC DETs)

**DFSC-DLA:**

- 3 Defense Fuel Region Offices

The CAS components, and particularly the DCAS and Service Plant Representative Offices (PROs) located at the prime contractor and subcontractor plants, perform subcontracting management functions and tasks. The various CAS components are structured to meet the needs of the applicable Service or defense agency. Figures 2-1 through 2-5 illustrate the differences in the organizational structure of DCASMA offices, DCASPROs, AFPROs, ARPROs, and NAVPROs. The general mission of the CAS components is to administer government contracts through reviews and analysis of cost and technical aspects of the contracts such as cost analysis and monitoring, quality assurance, production surveillance and product testing, etc.

DCAS administers contracts for major programs and logistic support contracts through DCASPROs located at several prime contractor facilities and in the proximity of several thousand subcontractor facilities. The Service PROs primarily administer contracts for research and development, and major systems and subsystems acquisition programs. Their efforts are usually accomplished at a small number of prime contractor facilities and subcontractor sites.

DCAS accomplishes the subcontracting management functions through interdisciplinary teams on their staffs. The Administrative Contracting Officer (ACO) is designated the team leader and is assisted by a centralized Contractor Purchasing System Review (CPSR) team located in a DCASR. The ACO is also assisted on an *ad hoc* basis by CAO personnel from other

functional disciplines. The functional discipline representatives are either located in the contractor's plant or serve all plants within a specified geographical area. DCAS has no functional organization dedicated to subcontracting management. In addition, it has no headquarters level positions nor formalized, written policies and procedures that solely address the DCAS role in subcontracting management.<sup>6/</sup>

The DCAS, Army and the Navy CAS components perform three primary subcontracting management functions: the CPSRs, the review and consent to subcontract, and supporting contract administration for other government CAS components. In addition:

- The Army relies on their prime contractors to manage the subcontractors of major system acquisition programs, and does not include specific subcontracting management clauses within prime contracts. CPSRs are conducted on an *ad hoc* basis. Accordingly, the Army CAS components have the smallest staffing of the three Services and have no CAS headquarters.<sup>6/</sup>
- The Navy also relies on their prime contractors to manage major system acquisition program subcontractors, and likewise does not include subcontracting management clauses within prime contracts. Subcontracting management functions including CPSRs and consent reviews are accomplished by their contract and administration personnel. Staffing of the Navy CAS organization is about six times the manning by the Army for approximately four times the value of the total procurement costs. The Navy does not have a CAS headquarters, but does have a management team in the office of the Chief of Naval Operations.<sup>6/</sup>
- The Air Force has been more involved in subcontracting management than any of the other Services. Through their organization structure and published regulations, they are directing increased

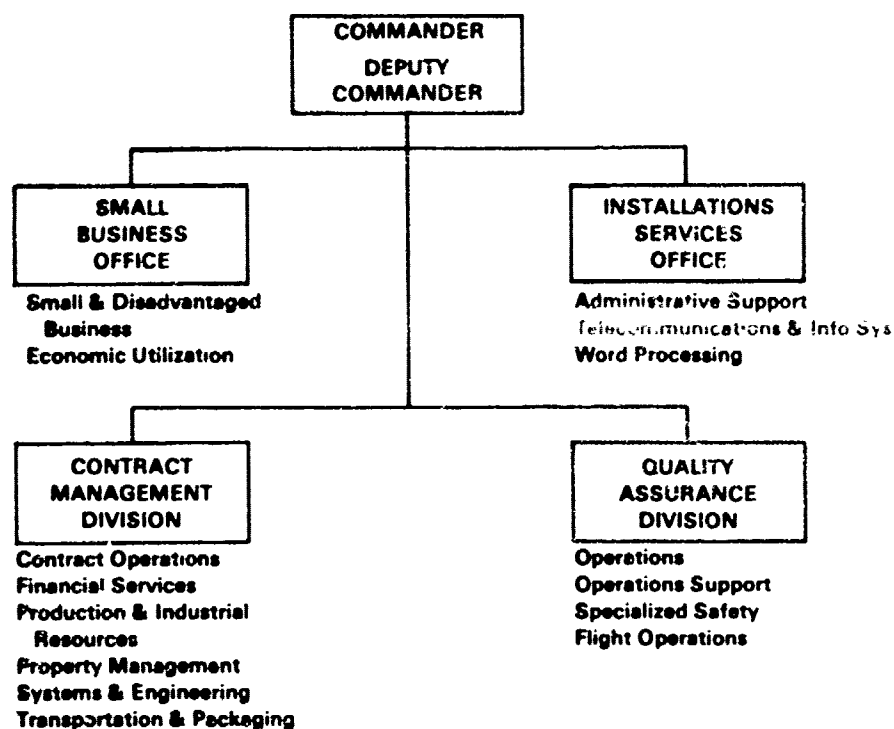


Figure 2-1. Typical Defense Contract Administration Services Management Area (DCASMA) Organization<sup>5/</sup>

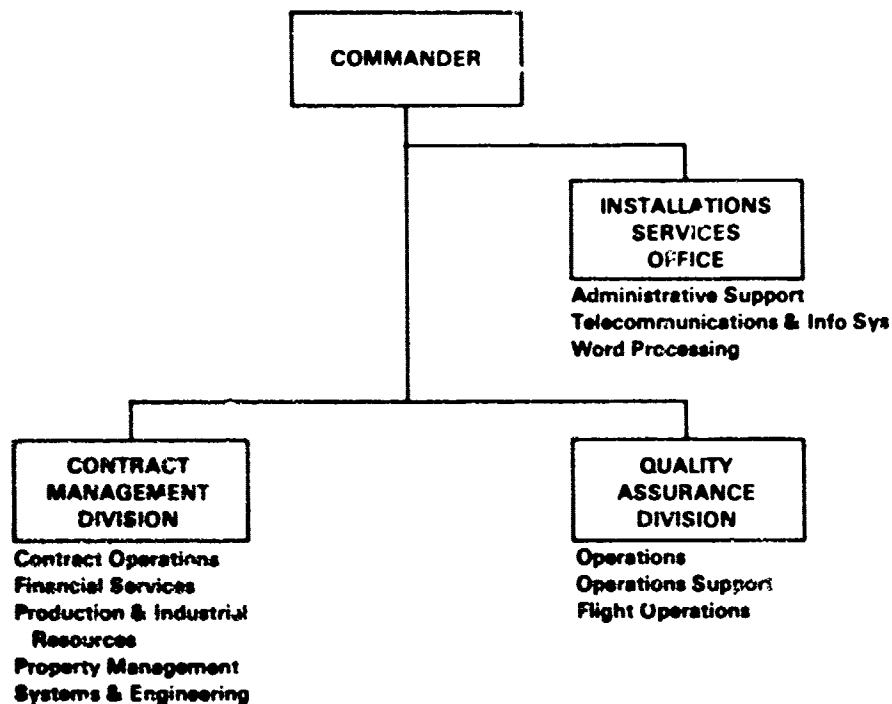


Figure 2-2. Typical Defense Contract Administration Services Plant Representative Office (DCASPRO)<sup>5/</sup>

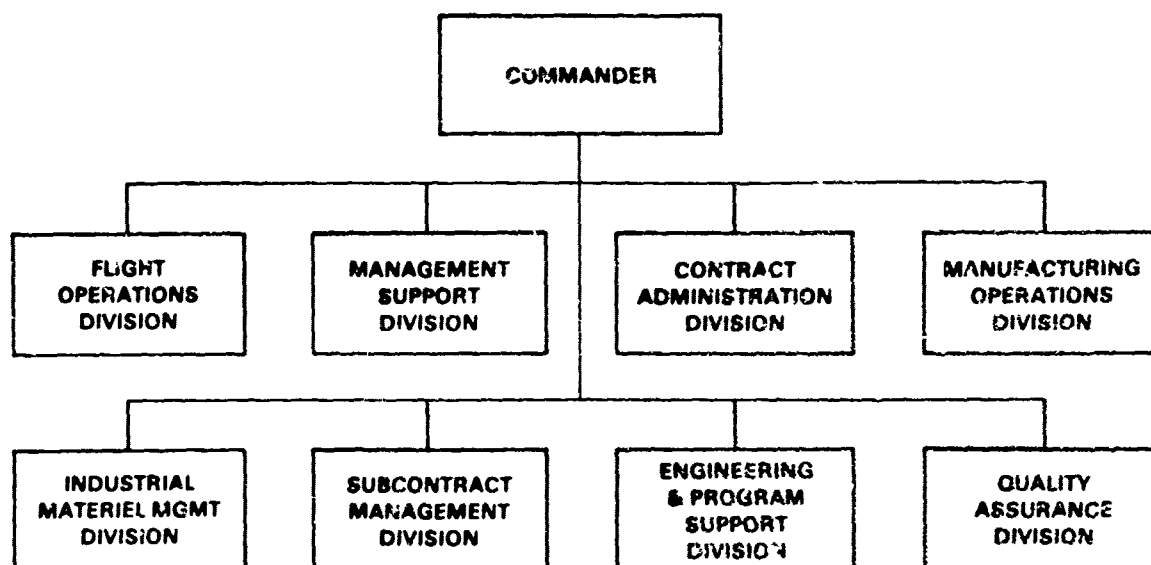


Figure 2-3. Air Force Plant Representative Office (AFPRO)<sup>5/</sup>

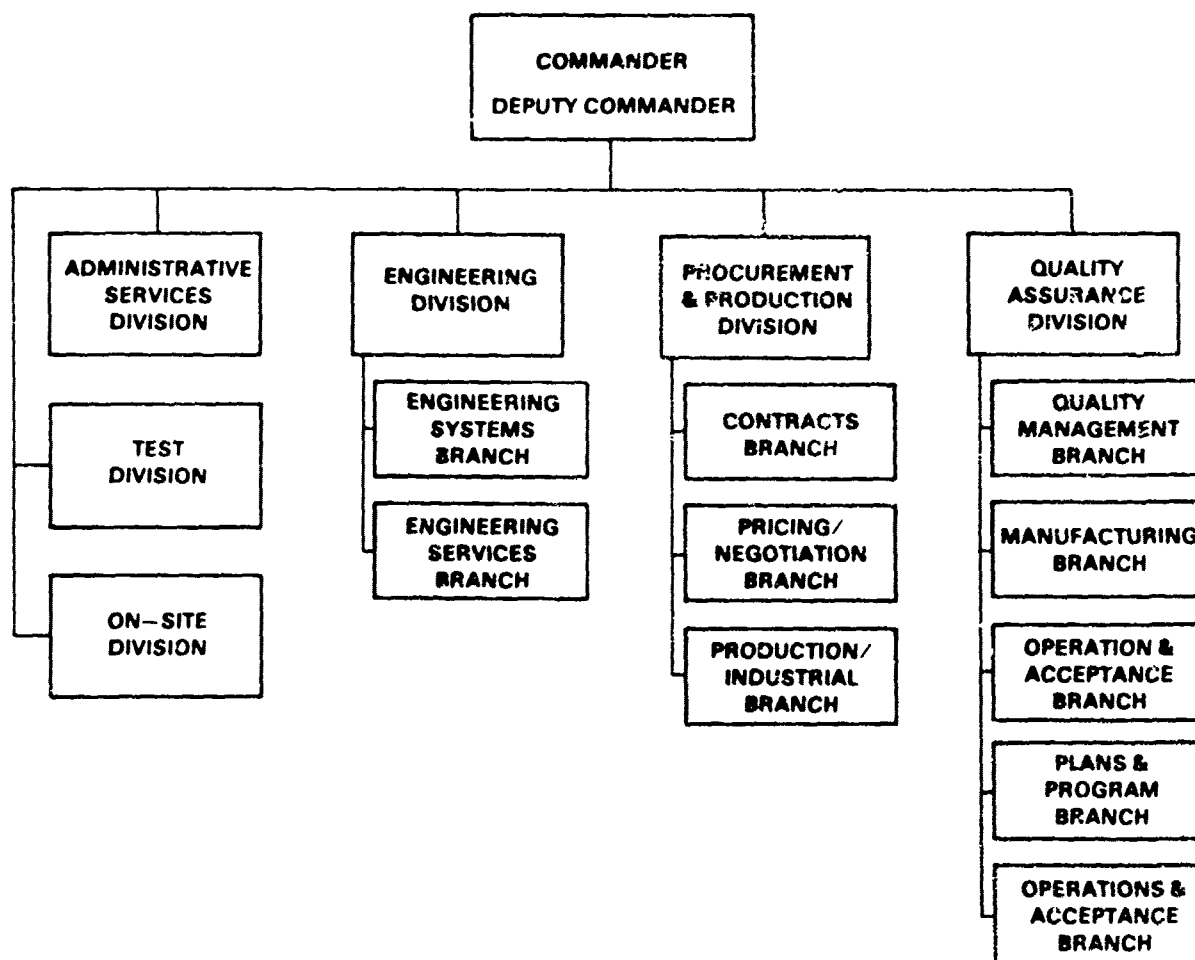
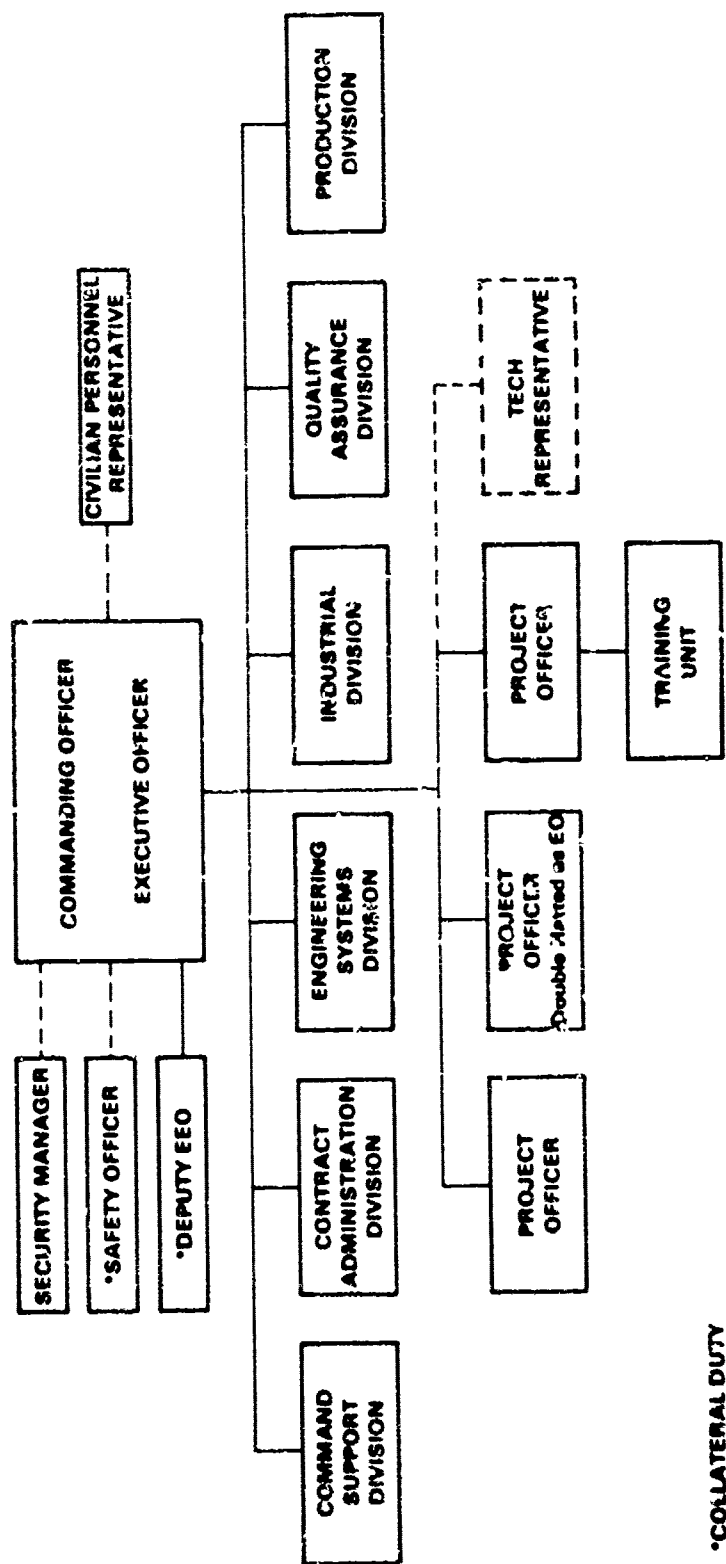


Figure 2-4. Army Plant Representative Office (ARPRO)<sup>5/</sup>



\*COLLATERAL DUTY

Figure 2-5. Naval Plant Representative Office (NAVPRO) 5/

management attention to the prime contractor to ensure that the primes are adequately managing their subcontracts. In addition, the Air Force has two CAS headquarters, the Air Force Logistics Command (AFLC), Contract Maintenance Center (AFCMC) and the Air Force Systems Command (AFSC) Contract Management Division (AFCMD). AFCMC attention is primarily directed at repair and overhaul activities overseas, and the AFCMD with major weapon system acquisitions from contractors within the United States. In addition, the AFPROs have a designated Subcontract Management Division. The Air Force CAS organization has about four times the staff and approximately ten times the procurement value as compared to the Army.<sup>6/</sup>

Many of the differences in the CAS organization staffing and approach to subcontracting management are predicated on the following:

- Service management philosophy,
- Staffing level restrictions,
- Experience with the prime and/or subcontractors,
- Types of systems or products being purchased,
- Number of contracts and subcontracts being managed,
- Number of contractors involved in an acquisition,
- Dollar value of the contracts assigned, and
- Complexities of the acquisition.

For a complete listing of CAS components, consult the current edition of DoD 4105.59-H, DoD Directory of Contract Administration Services Components.<sup>6/</sup>

## 2.6 INTERORGANIZATIONAL TRANSFERS

Interorganizational Transfer (IOT) is the term commonly used to describe materials, supplies, or services provided by a segment or division of the activity performing the prime contract. It should be noted that contractors refer to IOTs by various terms, such as Interdepartmental Transfers (IDTs), Interdivisional Issues (ISIs), and Interdivisional Work Authorizations (IDWAs). Used in this sense, the providing segment is normally designated a profit center.

Costs associated with IOT are treated as a portion of the *MATERIALS* cost element when the proposal is submitted by the prime contractor. It is important from the standpoint of both proposal evaluation and subsequent contract performance assessment that the work content, budgets, schedules, and contract provisions are fully documented. The evaluation of IOT must receive the same attention as subcontracts, with particular emphasis on whether the use of an IOT is the most advantageous to the Government.

Program Managers (PMs) should address the following issues of IOT management as part of their subcontracting management effort:

- IOTs must be fully documented on all proposals,
- Evaluation of IOTs should be consistent with FAR/DFARS 15.805,
- Ensure IOT work is performed at the segment identified in the prime contract, or if the location changes, evaluate the cost and schedule impact,
- Intra-company transfers between divisions or plants of a contractor should be made at reasonable costs excluding any internal or intermediate profit resulting from the compounding of overhead costs, unless extenuating circumstances have to be identified and are

delineated in the contract. Special attention should be given to these in-house costs to ensure that profits are not pyramided.

- The Contractor's IOT control system should be thoroughly reviewed as a part of the Contractor Purchasing System Review (CPSR), and
- Early identification of which portions of future acquisition are subject to award or IOTs will permit early Contract Administration Office (CAO) involvement.

## 2.7 SUBCONTRACTING MANAGEMENT VS. SYSTEM LIFE CYCLE

The major weapon system acquisition process is represented by five phases, with milestones established to support the transition from one phase to the next<sup>17</sup>. The phases currently used to describe the system life cycle are:

- Concept Exploration/Definition Phase,
- Concept Demonstration/Validation Phase,
- Full Scale Development/Low Rate Initial Production Phase,
- Full Rate Production/Initial Deployment Phase, and
- Operations Support Phase.

The degree of subcontracting and, therefore, subcontracting management varies in both the number of subcontractors and dollar value of specific subcontracts, as the acquisition life cycle progresses. In the early phases of a weapon system acquisition, the number of major subcontractors may be smaller than in the later phases, but the dollar value and critical nature of the subcontracted effort may be greater than in production. The production phase will normally have more subcontractors, but with multiple sources

and lower risk, the critical nature of a specific subcontract effort will be less.

The level of Government subcontracting management should be adjusted to reflect the shifting emphasis from a limited quantity high risk environment to one of low risk and high volume. Accordingly, the emphasis placed on the various subcontracting management techniques, discussed in the subsequent chapters of this handbook may be varied depending on the circumstances and environment of a system acquisition.

Chapter 3.0 discusses the key responsibilities and activities of the PMOs, CAS components, and contractors as a function of the system life cycle. Studies have shown that these functions are performed in a rather consistent manner throughout the system life cycle with the exception of areas which are invoked by contractual action such as Configuration Management or production specific programs such as the Industrial Modernization Incentives Program (IMIP) and subcontractor Production Readiness Reviews (PRRs).

## 2.8 SUBCONTRACTING MANAGEMENT EDUCATION

Educational opportunities for military personnel and civilian personnel from Government and private industry to acquire training and an additional understanding of the concept of subcontracting management are available at the Defense Systems Management College (DSMC) and the AFSC Systems Acquisition School, Brooks AFB. DSMC has two courses oriented to Program Managers that have segments on subcontracting management, and the AFSC Systems Acquisition School also presents a week long course on the concept. The courses are discussed below:

### DSMC

- **Program Management Course (PMC).** The course is twenty (20) weeks long and is presented three times a year. Attendees consist of O-3 through O-6

officers, DoD civilians GS-11 through GS-14, and industry personnel. The course is oriented to the study of program management from a DoD PM's point of view. The objective of the course is to improve the students ability to manage a defense system acquisition program successfully. Included in the course is a session on subcontracting management.<sup>8/</sup>

- **Contract Management for Program Managers (PMs).** A one week (five days) course that is provided seven times during the months of September and October. Attendees consist of Officers 0-2 and above, DoD civilians GS-9 and above, and industry personnel. The course provides a comprehensive overview of the management approach and techniques available to PMs to effectively manage their program contracts. Included in the course is a session on subcontracting management.<sup>8/</sup>

#### AFSC SYSTEMS ACQUISITION SCHOOL

- **Subcontracting Management Course.** The one week (five days) course is given four times a year at the school, and at other Air Force Commands, on request, about twice a year. Attendees consist of officers 0-3 through 0-6 and DoD civilians GS-11 through GS-14. In addition, some select NCOs are admitted. Students are primarily from within AFSC and its subordinate commands. Prospective students from other Air Force Commands, Services and DoD are currently accepted on a case-by-case basis. The objectives of the course are to provide an awareness of current subcontracting management policies and procedures; an understanding of the roles the System Program Office (SPO) and the Service Plant Representative Office (PRO) in subcontracting management; a comprehension of the impact of critical items on the acquisition process; and the ability

to apply subcontracting management techniques.<sup>2/</sup>

In addition there are numerous educational and training courses provided by DoD and the Services that pertain to various technical aspects of the weapon systems acquisition process. Information regarding course subject matter, duration, and enrollment requirements is provided in the course catalogues for:

- Industrial College of the Armed Forces (ICAF),
- Defense Systems Management College (DSMC),
- Army Logistics Management College (ALMC),
- Army Management Engineering College (AMEC),
- Air Force Institute of Technology (AFIT),
- Air University,
- AFSC Systems Acquisition School, and
- Naval Postgraduate School.

#### FOOTNOTES:

1/ FAR 21

2/ FAR 44.1.

3/ AFSCR 800-21, "Subcontracting Management," 16 July 1987.

4/ FAR 44.101.

5/ DoD 4105 59-H, "DoD Directory of Contract Administrative Services Components," July 1987.

6/ Donald L. Brechtel, Maj USAF, "Subcontracting Management: A Frontier of Opportunity," Research Report AU-ARI-85-3, Air University, June 1985, pp 71-75.

**1/** DoDD 8000.1, "Major and Non-major Defense Acquisition Programs," 1 September 1987.

**2/** DSMC Catalog and LtCol Wilson Summers, USAF, Deputy Director Business Dcpt, DSMC.

**3/** Subcontracting Management Course Material and Maj. Barry Levy, USAF, Course Director, AFSC Systems Acquisition School, Brooks AFB.

## CHAPTER 3.0

### SUBCONTRACTING MANAGEMENT CONCEPT, ENVIRONMENT AND TECHNIQUES

#### 3.1 NEED FOR SUBCONTRACTING MANAGEMENT

In the area of subcontracting, it is acknowledged that risks are increasing due to the following:<sup>1/</sup>

- Subcontractors receiving increasing amounts of acquisition program funding.
- Increasing numbers and greater geographic dispersion of subcontractors involved in acquisition programs.
- Increasing dependence on subcontractors for specialized components and subsystems critical to the production of the system being acquired.
- The continuing acquisition problems encountered due to prime contractors not properly flowing down or directing subcontractors to comply with contract requirements, or subcontractors failing to fulfill contractual commitments to prime contractors.

These increasing risks are reflected in cost growth, technical problems, schedule delays, and even supportability issues.

The correct assessment and effective management of risk are essential elements of program management and have been receiving increasing emphasis under DoD's acquisition improvement program. Section D of DoDD 5000.1<sup>2/</sup> states that the phases of the acquisition process should be tailored to fit each acquisition to minimize acquisition time and life-cycle costs, consistent with the urgency of need and degree of technical risk involved. In addition, Congress has repeatedly expressed its concern regarding the risks

associated with weapon system acquisitions, particularly the risks that impact Full Scale Development (FSD) and production costs and schedules.

DoDD 4245.7<sup>3/</sup> notes that elements of program risk should be identified and assessed throughout the acquisition cycle. Likewise, the DoD manual 4245.7-M<sup>4/</sup> notes that although Government and industry program managers have promoted increased emphasis on technical risk assessment in recent years, additional improvements are still needed.

Although the prime contractor has the responsibility for managing their subcontracts, the Government Program Manager (PM) is responsible and accountable for the overall success or failure of a designated system acquisition program.<sup>5/</sup> Since much of an acquisition program may well be "in the hands" of subcontractors, it behooves the PM to oversee all aspects of subcontracting management in order to ensure the success of the program. This oversight and enhanced attention regarding the lower tiers of a procurement by the PM must, of course, be directed towards the prime contractor so as not to infringe on the privity of contract between the prime contractor and their subcontractors. Thus, the PM involvement with subcontractors is indirect in nature.

#### 3.2 REGULATORY BASIS

The Government management of subcontractors occurs under the overall acquisition umbrella of the Office of Management and Budget (OMB) Circular A-109 and the Federal Acquisition Regulation (FAR), together with the Defense FAR Supplement (DFARS) and the DAR Sup-

plement 1 for DoD. These regulations are coupled with DoD directives and instructions, and military standards and specifications to establish a regulatory basis regarding the primary functional aspects of program management as they relate to subcontracting management. See Figure 3-1.<sup>6/</sup> Similarly, Figures 3-2 through 3-4 illustrate the regulatory foundation for the three Services.

### 3.3 ENVIRONMENT AND TECHNIQUES

Since the reduction of risk is a major concern for the Program Management Office (PMO) throughout the acquisition process, the employment of the subcontracting management concept is not only logical but essential. The primary environment within which the concept is applied is the system acquisition life cycle. The environment is influenced by the acquisition strategy that is developed by the PMO, as well as numerous other factors, however, a program's acquisition strategy is significant in that it details a plan of action for proceeding from one milestone to the next. An essential part of the strategy is the approach the Government will take in the area of competition and in particular, subcontracting competition. Another factor which is disregarded by many PMOs, yet can favorably affect the environment, is encouraging capital investment into state-of-the-art technology, equipment and facilities. Government programs such as the Manufacturing Technology (MAN-TECH) and the Industrial Modernization Incentives Program (IMIP) can assist in improving productivity of both the prime and the subcontractors, and these programs are especially valuable at the subcontractor level where funds for capital investments are usually more constrained than at the "large" prime contractor level.

The environment factors are discussed in more detail in Chapters 4.0 through 7.0. Techniques used in the Subcontracting Management concept are presented subsequently in Chapters 8.0 through 11.0, and

are discussed by the objectives to be achieved, the application of the technique, the activities involved in the technique, the possible impacts of not applying the technique, and finally, the references applicable to the technique.

#### FOOTNOTES:

1/ AFSCR 800-21, "Subcontracting Management," 16 July 1987.

2/ DoDD 5000 1, "Major and Non-Major Defense Acquisition Programs," 1 Sept. 1987.

3/ DoDD 4245.7, "Transition from Development to Production," 19 January 1984, p 2

4/ DoD 4245 7-M, "Transition from Development to Production," September 1985, p 9-8

5/ "Introduction to DoD Program Management," (Advance Copy), DSMC, April 1986, p 12.

6/ Major Donald L Brechtel, USAF, "Subcontracting Management: A Frontier of Opportunity," Research Report No. AU-ARI-85-3, Air University, June 1985, pp 57-59. (Figures 3-1 and 3-2 are updates of Figure 5, page 58 of the report )

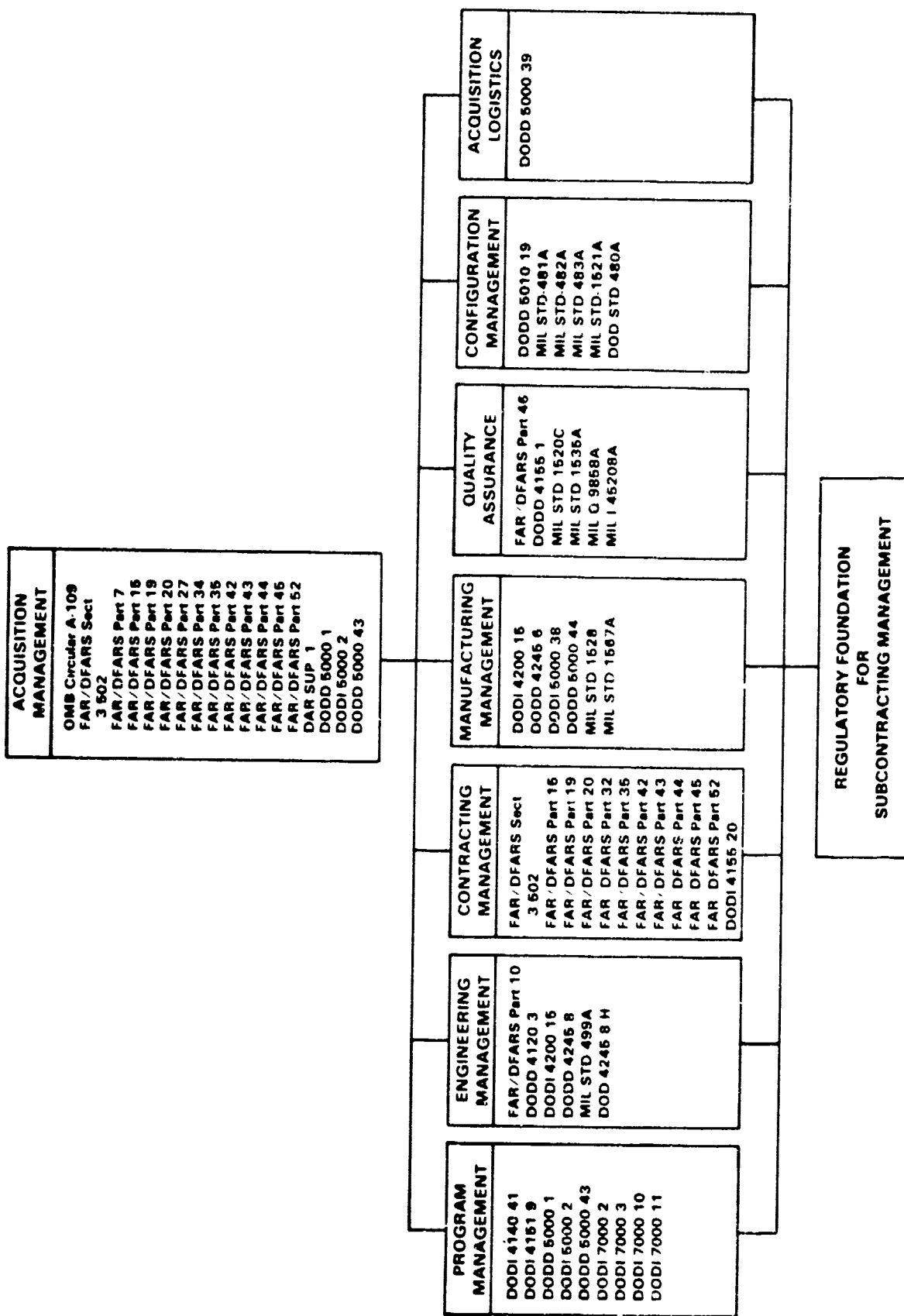


Figure 3-1. Government and DoD Functional Guidance Related to Subcontracting Management

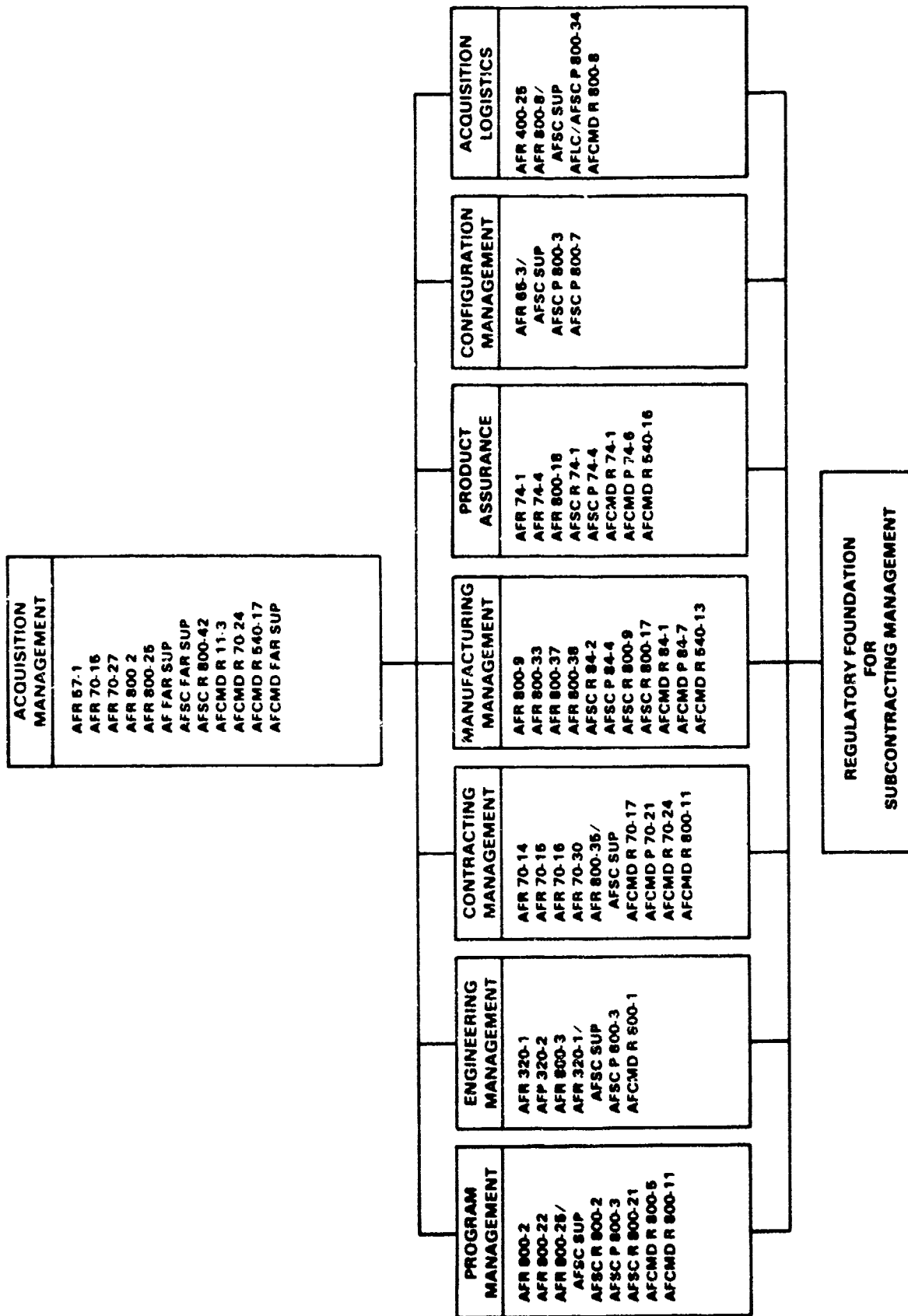


Figure 3-2. Air Force Functional Guidance Related to Subcontracting Management

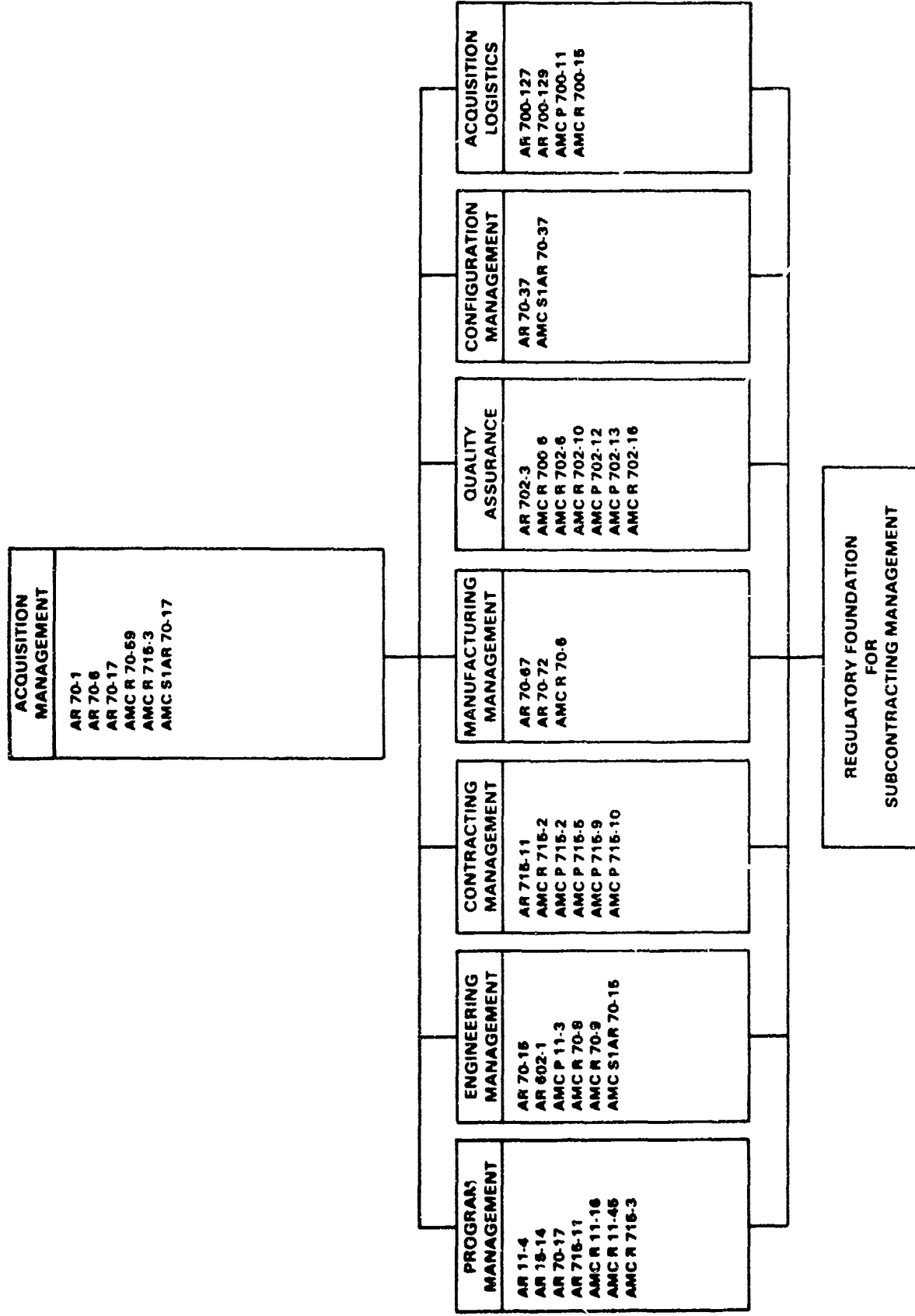
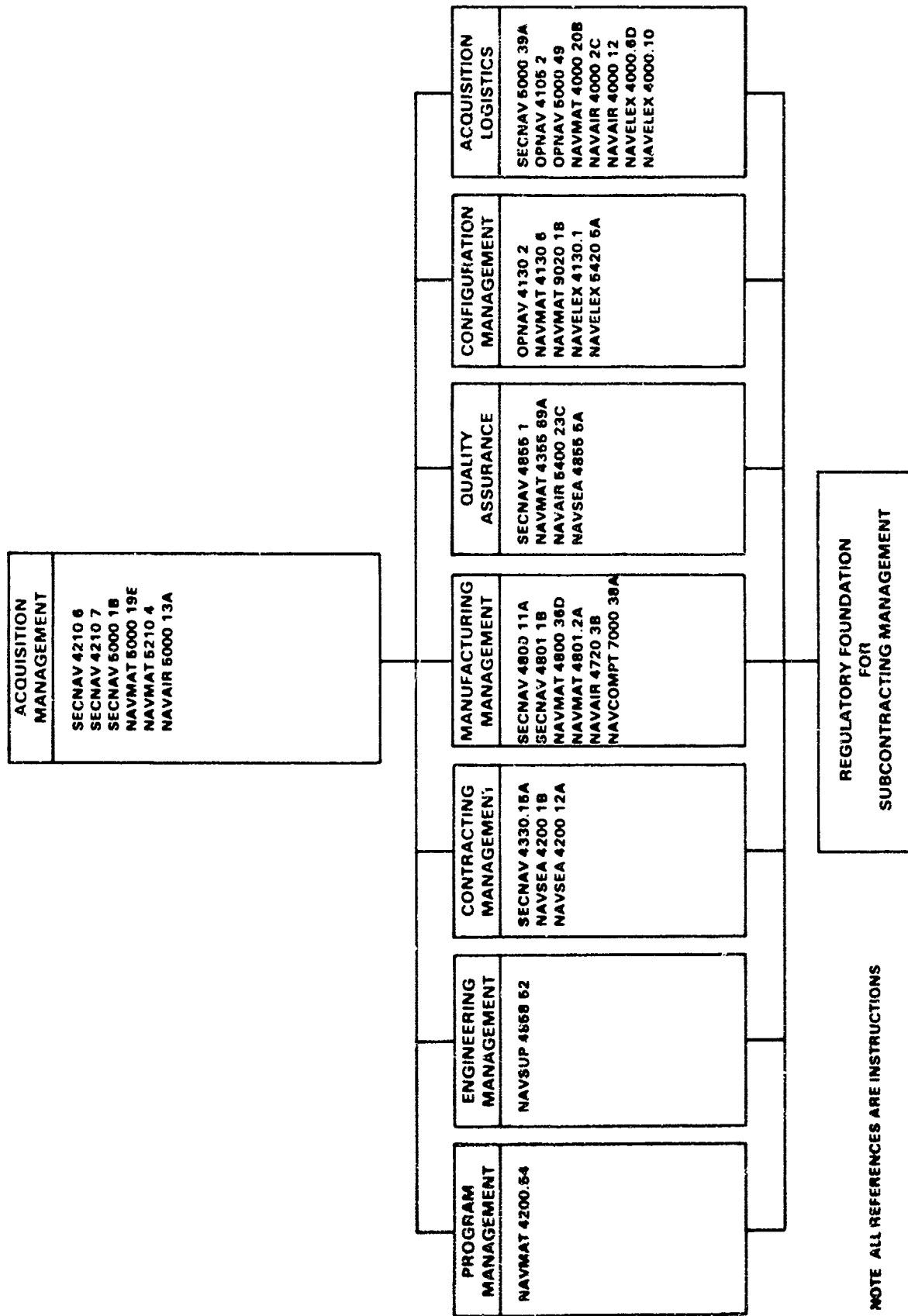


Figure 3-3. Army Functional Guidance Related to Subcontracting Management



NOTE ALL REFERENCES ARE INSTRUCTIONS

Figure 3-4. Navy Functional Guidance Related to Subcontracting Management

## CHAPTER 4.0

### ACQUISITION MANAGEMENT

#### 4.1 WEAPON SYSTEM ACQUISITION LIFE CYCLE PHASES

DoDD 5000.1<sup>1/</sup> establishes the policies and procedures for governing the acquisition of both major and non-major defense systems. The policy of the Department of Defense (DoD) is to ensure that system acquisitions are accomplished in accordance with the guidelines of OMB Circular A-109<sup>2/</sup>, and as efficiently and effectively as possible to achieve the system's operational objective. DoDI 5000.2<sup>3/</sup> delineates uniform procedures for major acquisition programs and establishes specific requirements and responsibilities. Both DoDD 5000.1 and DoDI 5000.2 specify the milestone decision points (program reviews) and phases that are normally used for managing defense acquisition programs.

Major defense acquisition programs are categorized as either Defense Acquisition Board (DAB) programs, which would require DAB program reviews, or component programs, which only require DoD component (Service) program reviews such as (Service) Systems Acquisition Review Council [(S)SARC] or Navy Program Decision Meeting (NPDM), and DoD component (Service) Head approval.

Major and non-major system acquisition programs normally proceed through five basic phases during a system's life cycle (See Figure 4-1):

- Concept Exploration/Definition Phase,
- Concept Demonstration/Validation Phase,
- Full Scale Development and Low-Rate Initial Production Phase,
- Full-Rate Production and Initial Deployment Phase, and

- Operations Support Phase.

Program reviews for Milestones (MS) 0 through III must be accomplished successfully before a system acquisition program can proceed to the next acquisition phase. Once in the Operations Support Phase, two more Milestones, IV and V are scheduled. Milestone IV is a planned program review about one or two years after the initial deployment of a system to determine if the operational readiness and support objectives of the program are being achieved and maintained. Finally, a Milestone V program review is planned about five to ten years after the initial deployment of a system to determine if major upgrades are necessary, or circumstances warrant consideration of replacement action.

Figure 4-1 illustrates the key points of the acquisition program review milestones of a typical DAB program. A component program would have the same review milestones, however, as mentioned above, program reviews would be accomplished by Service level reviews rather than DAB reviews. Likewise, program approval would be made by the Component Head in lieu of the Secretary of Defense (SecDef), degree of formality and program documentation would be modified to meet the needs of the acquisition program.

The acquisition phases for DAB programs and Component programs should be modified to minimize the acquisition time and life-cycle costs, consistent with the urgency of need and degree of technical risk involved, and progress as demonstrated by validated test results. This in effect is a tailored acquisition strategy, as required by DoDD 5000.1. Further, since acquisition programs involve an incremental, sequential process, the programs should be structured and

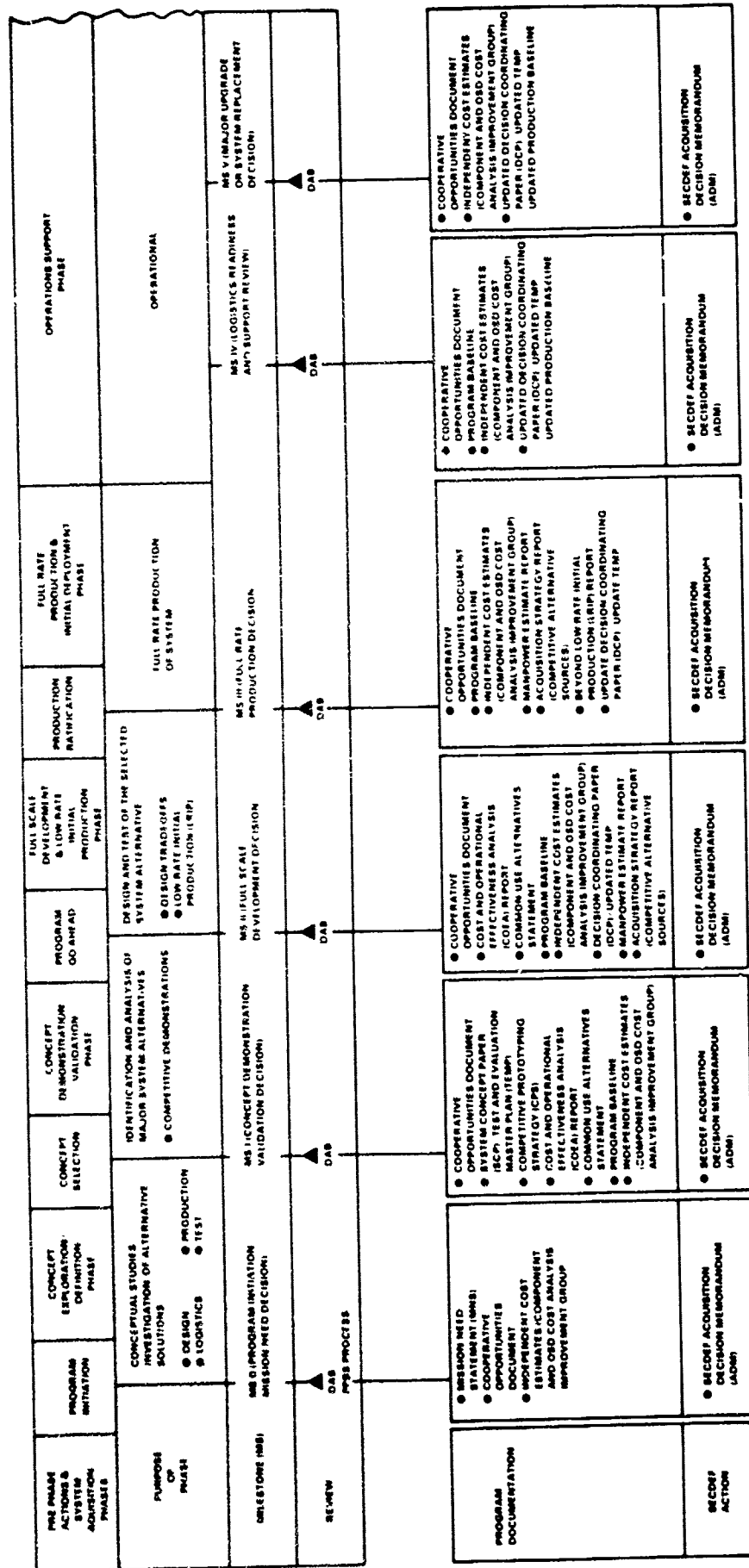


Figure 4-1. Acquisition Program Review Milestones for DAB Programs. 4/

resources allocated in such a manner that the demonstration of actual achievement of program objectives is the pacing function. Also, as the program progresses through the acquisition phases, additional and improved information can be acquired which will provide a basis for practical tradeoffs between system capability, costs and schedules.<sup>5/</sup> Thus, progression through the acquisition process has ramifications for the Program Management Office (PMO), the Contract Administration Service (CAS) organization, the prime contractor, and the subcontractors.

#### 4.2 SUBCONTRACTING MANAGEMENT FUNCTIONS BY PHASES.

The Program Management Office (PMO) should be involved in subcontracting management throughout all of the phases of the system acquisition, as will the Contract Administration Service (CAS) organization. Subcontractors participation in a system acquisition vary by the phase of the process. As the acquisition proceeds, subcontractors' involvement increases and then peaks during the Full-Rate Production and Initial Deployment Phase. Then as the production nears conclusion, the subcontractors involvement tapers off through the Operations Support Phase during which time they may be involved in providing logistic support for the systems fielded. (See Figure 4-2.) As the subcontractors involvement vary from phase to phase, so will the Government's emphasis on subcontracting management.<sup>6/</sup>

#### FOOTNOTES AND REFERENCES:

1/ DoDD 5000.1, "Major and Non-Major Defense Acquisition Programs," 1 September 1987.

2/ OMB Circular A-109, "Major System Acquisitions," 5 April 1976.

3/ DoDI 5000.2, "Defense Acquisition Program Procedures," 1 September 1987.

4/ Figure 4-1 is based on DSMC chart SE-T 1001 from "Program Manager," DSMC magazine, Jan-Feb.

1986 issue and revised to reflect DoDD 5000.1 and DoDI 5000.2 of 1 September 1987.

5/ NAVSO P-2457, "RDT&E/Acquisition Management Guide," 10th Edition. January 1987. p.2-13.

6/ Donald L. Brechtel, Maj. USAF, "Subcontracting Management: A Frontier of Opportunity," Research Report AU-ARI-86-3, Air University, June 1986, p. 5.

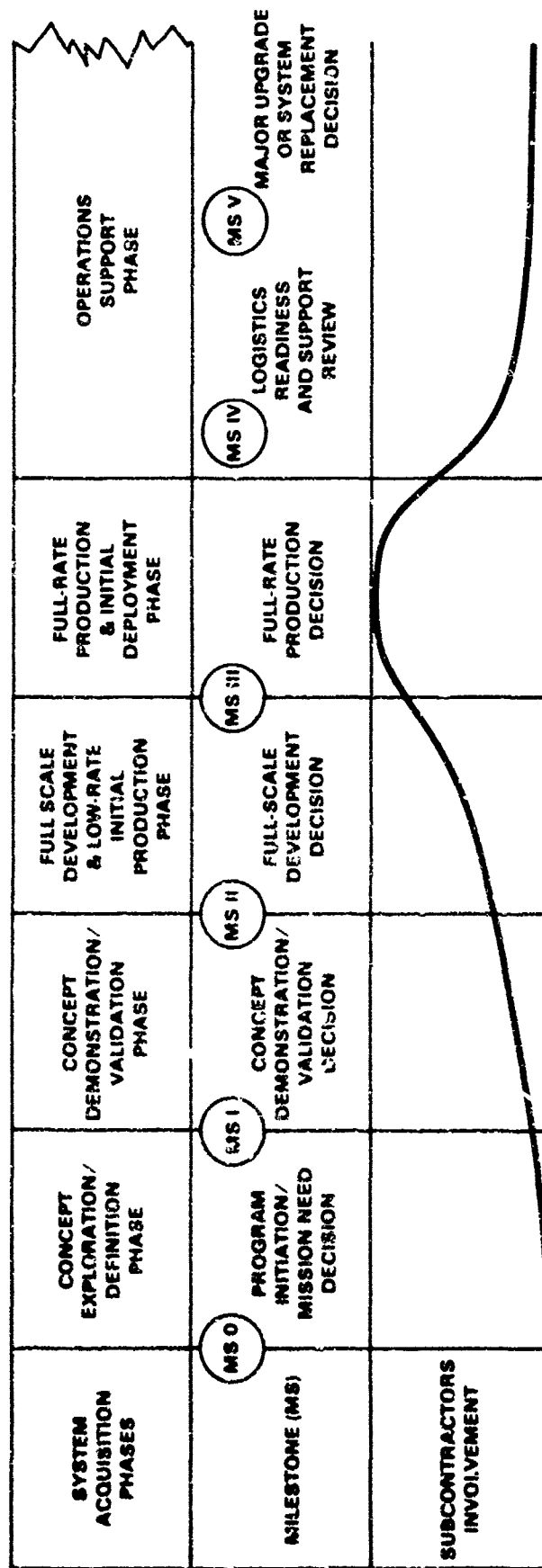


Figure 4-2. Subcontractors Involvement by Acquisition Phase.

## CHAPTER 5.0

### ACQUISITION STRATEGY

#### 5.1 ACQUISITION STRATEGY AND PLANNING

Acquisition strategy, when properly developed, defines the overall interrelationships among management, technical, business, resource, force structure, and support aspects of an acquisition for the entire program. DoDI 5000.2<sup>1/</sup> discusses acquisition strategy as follows:

**\*Acquisition Strategy.** Discuss general strategy for the entire program, and detailed strategy for proceeding to the next milestone. Emphasize program structure. Address specifically competition, contracting, and acquisition streamlining for all phases. Discuss planning for LRIP. Outline production planning to ensure an industrial base response that will support efficient manufacture and provide surge capacity, when appropriate. At Milestone II, verify that future cost and schedule are defined in detail and credible. At Milestone III, verify the credibility of production cost and appropriateness of the production/deployment schedule. Discuss program cost control measures. Discuss the appropriateness of multi-year procurement funding. At Milestones I-III, discuss whether the program should be a Defense Enterprise Program and a milestone authorization program.\*

#### 5.2 ACQUISITION PLAN

Part 7 of the FAR/DFARS, "Acquisition Planning," establishes the principles of developing a plan for the efficient meeting of agency needs. Two points are critical in the understanding of Part 7 of the FAR/DFARS. First, is that the acquisition plan should address the entire life cycle of an acquisition and secondly, "... Agencies shall perform acquisition planning and conduct market surveys for all acquisitions in order to promote and provide for full and open competition ... While all the twenty-six elements have at least related subcontract issues, ten of these require special subcontracting management emphasis. The twenty-six elements are presented below and those marked with an asterisk (\*) are further

described in this section. It should be noted that agencies have the latitude to develop their own acquisition planning systems that generally meet the requirements of Part 7.

Element	Major Subcontracting Management Emphasis
---------	--

#### Acquisition Background and Objective

1. Statement of Need
2. Applicable Conditions
3. Cost
4. Capability or Performance
- 5.\* Delivery or Performance  
Period requirements
- 6.\* Trade-offs
- 7.\* Risks

#### Plan of Action

- 1.\* Sources
- 2.\* Competition
- 3.\* Source Selection  
Process
- 4.\* Contracting Considerations
5. Budgeting and Funding
6. Product Descriptions
7. Priorities, Allocations,  
and Allotments
- 8.\* Contractor versus Government Performance
9. Management Information  
Requirement
- 10.\* Make or Buy
11. Test and Evaluation
- 12.\* Logistics Considerations
13. Government Furnished  
Property
14. Government Furnished  
Information
15. Environmental Considerations
16. Security Considerations
17. Other Considerations
18. Milestones for the Acqui-

19. Identification of Participants in the Acquisition Cycle  
 Identification of Participants in the Acquisition Plan Preparation

Delivery of Performance Requirements

- The establishment of delivery and performance requirements must take into consideration the industrial capability of the candidate firms, or classes of firms involved, including the potential capacities and capabilities of subcontractors.
- The potential degree of concurrency and the issue of competition must be addressed from the risk imposed if a prime contractor is faced with critical subcontracting efforts.

Trade-Offs

Trade-off studies, in the form of formal deliverables by the contractor or as generated by the PMO, are an essential element of all milestone decisions. Subcontracting issues arise early in the program when broad decisions are made such as whether to use off-the-shelf solutions (preferable) or to develop a capability and how to promote competition at all levels. Trade-offs later in the program should focus on production schedules and supporting subcontractor schedules as a function of cost and supportability requirements

Risk

Risks at the subcontractor level must be addressed by both the prime contractor and the PMO, with inputs from established CAS surveillance reports. As the program progresses, the risk issues proceed from R&D technology risks to risks associated with low rate initial production, then to full production.

Sources

The PMO, procuring activity and potential CAS components, if known, must work together in structuring solicitations and associated evaluation criteria to ensure

that the other goals of competition and risk reduction are met within the framework of the acquisition strategy.

Competition

Subcontracting competition is an absolutely vital area of concern to the Government and prime contractor alike: the policy of the Government is to pursue full and open competition. The guidance in FAR/DFARS concerning the Contractor Purchasing System Review (CSPR) specifically address the degree of price competition as a factor to be evaluated. The degree of competition which is achieved by the contractor, or the reasons for not obtaining competition, is one factor that should be reviewed by the ACO when granting consent to subcontract.

Source Selection Process

The source selection process as it relates to subcontracting deals with the review and evaluation of not only the proposed subcontractor(s), but also the selection procedures used by the prime contractor. The timing of subcontract awards must be evaluated with respect to the program requirements to ensure that sufficient lead time exists to provide for ACO consent if required.

Contracting Considerations

For each contract contemplated, both prime and subcontracts, consideration and discussion should be presented regarding the following topics: the contract type to be selected; the use of multiyear contracting, if applicable, and any other options, or other special contracting methods; the use of any special clauses, special solicitation provisions, or FAR deviations; whether sealed bidding or negotiations will be used together with the rationale for the method to be utilized; whether equipment will be acquired by lease or purchase and the reasons therefore; as well as any other contracting considerations.

### Contractor versus Government Performance

Consideration must be given to whether supplies and services which are required are to be subcontracted by the prime contractor or provided and performed by the Government. The policy of the Government is to rely primarily on the private sector, however, some areas such as trade-off studies and system analyses are able to be performed by Government activities as well.

### Make or Buy

Part 15.7 of the FAR/DFARS addresses "Make or Buy" programs. A "buy" item is defined as work performed by a subcontractor. This is one area where the Government is actively involved in the management decision of the prime contractor. The Contracting Officer normally requires a make or buy plan to be submitted by prospective contractors for all negotiated acquisitions with an estimated value of \$2 million or more except for:

- R&D with no significant follow-on production under the same contract,
- items or services with adequate price competition or with commercial prices which reflect significant quantities, and
- work determined by the contracting officer to be non-complex.

The Procuring Contracting Officer (PCO) may also request a make or buy plan be submitted for acquisitions under \$2 million if the PCO determines the information to be necessary and then documents the need in the contract file.

The PMO should actively assist the PCO in evaluating the prime contractor's make or buy plan. Areas for evaluations found in FAR include:

- (1) Whether the contractor has justified performing work in plant that

differs significantly from its normal operations.

- (2) Whether the contractor's recommended program requires Government investment in new or other facilities in order for the contractor to perform the work in plant. (This additional cost to the Government would not be reflected in the contract price.)

- (3) The impact of the contractor's projected plant work loading on indirect costs.

- (4) The contractor's consideration of the competence, ability, experience, and capacity available in other firms, especially small business, small disadvantaged business, or labor surplus area concerns.

- (5) The projected location of any required additional facilities in or near labor surplus areas.

- (6) The contractor's make-or-buy history regarding the type of item concerned.

- (7) The scope of proposed subcontracts, including the type of item concerned.

- (8) Other factors such as future requirements, engineering, tooling, starting load costs, market conditions, technical superiority, and the availability of personnel and materials.

Once again, the primary consideration of the PCO is to protect the interest of the Government. The make or buy plan for a specific contract sets the stage for the determination of the level of effort of the subcontracting management involvement required of the PMO.

### Logistic Considerations

Logistic considerations must be considered at the subcontractor level as well as the prime. The Government, through the prime contractor, must ensure that the

system being acquired will be fully supported. A critical issue to be considered under logistics support is that of data rights. The prime contractor must ensure, through clauses in the subcontract, that data required, including repurchase data, is obtained. The new category of Government, Purpose License Rights (DFARS 27.4) provides the Government the rights to "... use, duplicate or disclose technical data ... in whole or in part and in any manner, for Government purposes only, and to have or permit others to do so for Government purposes only. Government license rights include purposes of competitive procurement ..."

The policy of the Department of Defense is that prime contractors and higher-tier subcontractors not use their power to award subcontracts as leverage to gain access to subcontractor data. Therefore, subcontractors may submit data directly to the Government in accordance with DFARS 27.472-8.

### 5.3 NON-DEVELOPMENT ITEMS (NDIs)

It is a matter of policy that new development of systems or items be undertaken only after a thorough validation of alternative and commercial sources has been made.<sup>2/</sup> This presents another reason for early PMO assessment of alternatives even prior to the receipt of a contractor proposal. Subcontract provided items may be considered for direct purchase by the Government, and then provided as Government Furnished Equipment (GFE) or Material (GFM) to the prime contractor.

When evaluating the make or buy plan of the prime contractor, the application of NDIs should always be considered as a means of reducing costs, fostering competition and achieving reduced specification requirements. Non-development Items (NDIs) can be either commercial products or items which have been developed for use by other military services, countries or government agencies, or a modified version of the basic product. Fact Sheet 3.1.1 (July 1985) of DSMC Program

Manager's Notebook<sup>3/</sup> provides an excellent discussion of NDIs. A Program Manager should select an acquisition strategy that will satisfy program requirements within scheduling and funding resources. The strategies can be selected from a complete range of approaches, from commercial off-the-shelf NDIs to full development of new systems. Tailored acquisition strategies can employ a varying degree of NDI as illustrated in Figure 5.-1<sup>4/</sup>

### Preplanned Product Improvement (P<sup>3</sup>I)

P<sup>3</sup>I is an acquisition concept which considers the improvement in a system as a design consideration. It is not to be used as a means to correct deficiencies or to extend the research and development process. The objectives include:

- Improving technological performance over a system life through rapid fielding of technological advances,
- Shortening acquisition and deployment time, and
- Risk reduction.<sup>3/</sup>

When the decision to incorporate P<sup>3</sup>I in the acquisition strategy is made, it must be carried through to any subcontracting activity. A particular subcontract may not require special P<sup>3</sup>I emphasis or planning, but the potential impacts must be considered. There are particular areas, however, which must be structured to support P<sup>3</sup>I. Some of these are:

- Threat changes,
- Integrated Logistic Support,
- Weight and Power Sensitive Components, and
- Use of commercial items.

The implementation of P<sup>3</sup>I in subcontracts requires a great deal of planning to accomplish the competing objective of structuring low risk - well defined

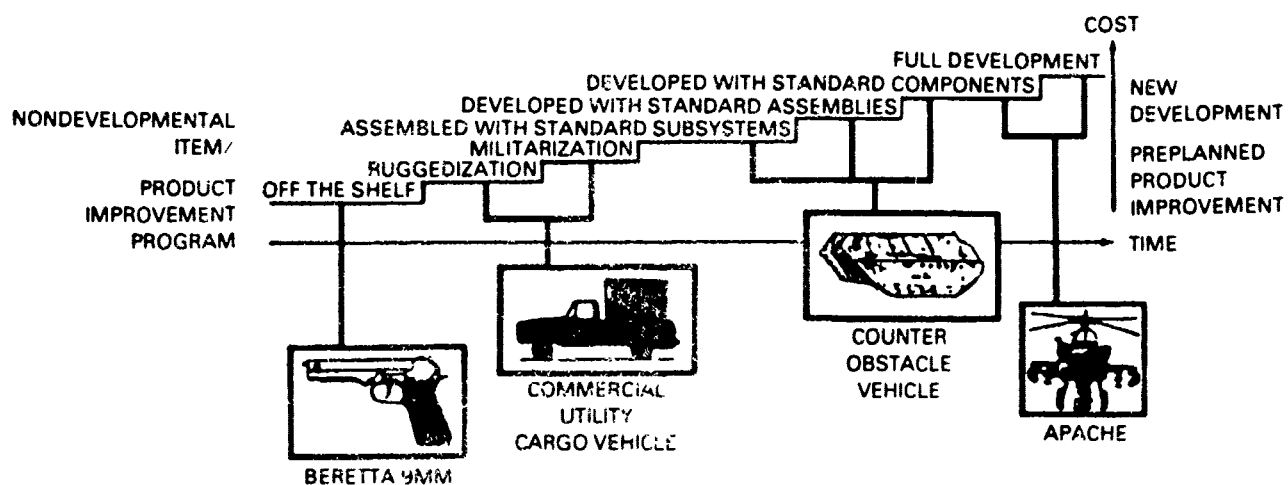


Figure 5-1. Example of Varying Degrees of NDIs<sup>4/</sup>

requirements and at the same time making provisions for yet to be defined changes. The proper application of P<sup>3</sup>I will minimize perturbations in production and support which can occur with the introduction of changes.

#### FOOTNOTES AND REFERENCES:

1/ DoDI 5000.2, "Defense Acquisition Program Procedures," 1 Sep 1987

2/ DoDD 5000.1, "Major and Non-Major Defense Acquisition Programs," 1 Sep 1987

3/ "Program Manager's Notebook," DSMC, Oct. 1985.

4/ AMC/TRADOC P70-2, "Material Acquisition Handbook," 1987, p. 17.1.

## CHAPTER 6.0

### COMPETITION

#### 6.1 COMPETITION PLANNING AND REQUIREMENTS FOR SELECTING PRIME CONTRACTORS

In accordance with DoDD 5000.1<sup>1/</sup> the Program Manager (PM) should ensure that adequate provisions are made in the program's acquisition strategy for obtaining competition in each phase of the acquisition at both the prime contractor and subcontractor levels to the maximum extent possible. This should include planning for ideas and technologies competition in the early phases of the acquisition, and the employment of commercial-style competition procedures that emphasize quality and the attainment of performance requirement objectives, as well as price during the production phase. The PM should also ensure that the acquisition strategy encourages and promotes the narrowing of competing alternatives, and the elimination of concepts no longer considered viable as the acquisition process progresses. The narrowing of competing alternatives should be accomplished carefully so as not to affect or adversely impact on outstanding contracts needed for the selected alternative. This latter action need not be timed to coincide with milestone decision points.

In addition, DoDD 5000.1 states that competition prototyping of critical systems, subsystems, and components should be encouraged and emphasized early in the Concept Demonstration/ Validation Phase (See Figure 4-1).

An important objective in establishing competition is to ensure that the competition is effective and results in cost-effective improvements in technical, schedule, supportability, or life-cycle cost aspects of the system.<sup>2/</sup>

Competition can be of the following types:<sup>3/</sup>

- Full and open competition,
- Full and open competition after exclusion of sources, and
- Other than full and open competition.

Contracting officers should promote and provide full and open competition to the maximum extent possible. Such competition should be accomplished through sealed bids or other appropriate competitive procedures. (FAR 6.1)

Sources may be excluded from full and open competition by using set-asides for small business and labor surplus area concerns for example. (FAR 6.2)

Other than full and open competition requires justification such as (FAR 6.3):

- There is only one responsible source or a limited number of responsible sources that will satisfy the Government's needs and requirements.
- There are unusual and compelling urgency reasons such that the Government would or could be "seriously injured" if the acquisition was not accomplished in a timely manner.
- There is a need to maintain a facility, producer, manufacturer, or other supplier and promote a supply or service source in order to facilitate an industrial mobilization capability, or to establish or maintain an essential engineering, Research and Development (R&D) capability at an educational or other nonprofit institution, or federally funded R&D center.

- International agreements or treaties preclude the use of full and open competition.
- U.S. statutes expressly authorize or require that acquisitions be made from specific sources or through other Government agencies as:
  - Federal Prison Industries,
  - Qualified Nonprofit Agencies for the Blind or other Severely Handicapped,
  - Government Printing and Binding, and
  - 8(a) Program firms.
- National security considerations preclude public disclosure of the Government's needs.
- Disclosure of the Government's needs would not be in the public interest.

Two types of competition that are of major import to the PM are the design competition and the production competition that are discussed below:<sup>2/</sup>

- Design competition - should begin as early in the acquisition process as possible, in the Concept Exploration/Definition Phase and continue to and including, if necessary, the Full Scale Development and Low-Rate Initial Production Phase. The objective of the design competition should be to select one system or concept that will best meet the Government's needs, from a group of competing alternative approaches. The selection criteria can be based on one or more essential considerations as technical performance, schedule, life-cycle cost, etc. During the Concept Exploration/Definition Phase the design competition should solicit concepts from a variety of potential sources. Several of the most promising concepts should be considered in the Concept Demonstration/Validation Phase. Next in the

Full Scale Development and Low-Rate Initial Production Phase, one or more concepts should be selected and subsequently reduced to one concept for production. It should be noted that design competition is an expensive proposition with each succeeding phase costing more than the last. However, design competition can be a valuable asset in reducing acquisition risk.

- Production Competition - The primary objectives of the production competition are normally to obtain the "best" price, encourage improvements to qualify (including R&M) and to enhance the industrial base. Production competition can be of value throughout Full-Rate Production and Initial Deployment Phase.

There are times when utilizing Production Competition is not appropriate or even feasible and other techniques should be considered by the PM for controlling and reducing costs, such as:<sup>2/</sup>

- Subcontract Competition when a large portion of the dollar value of the prime contract is passed on to subcontractors. This type of competition can result in significant cost savings while avoiding up-front investment costs.
- Component breakout.
- Multiyear procurement.
- Innovative use of Industrial Modernization Incentives Program (IMIP).
- Aggressive Value Engineering (VE) Program.
- Innovative use of incentive contracts.
- In-depth should-cost analysis of the sole source prime contractor.
- Competition among end items.
- Production improvement of an existing item.

## 6.2 SUB-TIER COMPETITION

The PM should evaluate the percentage of planned subcontracting when assessing the potential for Production Competition. Consideration should be given to the prime contractor's make-or-buy plan and the identification of potential subsystems for competition. A high degree of subcontracting is not sufficient justification to exclude competition. It has been noted that in a competitive environment, prime contractors can more effectively encourage their prospective subcontractors to control costs than in a single source environment. Conversely, the prospective subcontractors will be more responsive to reducing costs, to increase the prime contractor's chances of winning a contract.<sup>4/</sup>

Subcontracting competition can be promoted by the PM in the following ways:<sup>5/</sup>

- Reviewing major subsystems for multiple sourcing candidates (for parallel development) to determine if prime contractors should be required to provide multiple sources for selected subsystems during development. Design enhancement and/or risk reduction versus increased cost should be the basis for this evaluation.
- By evaluating the extent of subcontractor competition planned by the prime contractor during source selection for the system. In particular, the PM should consider the prime contractor's plan for qualifying additional subcontractors for less-than-major subsystems. Emphasis should be on reducing life-cycle cost and providing a competitive base for future spare parts acquisitions.
- In conjunction with the contracting officer, the PM should consider and incorporate, when appropriate, contractual provisions to enhance subcontract competition objectives (life-cycle cost reduction, risk reduction, and future competitive spare parts acquisitions). Enhancement of

future competitive spare parts acquisitions will require integrated planning and execution with the program maintenance concept.

## 6.3 SUBCONTRACTING SOURCE SELECTION

The prime contractor's source selection, policies and procedures for subcontracting efforts should include both commercial practices and the Government requirements that modify them. The following are some of the topics that should be considered by the PM and contracting officer in their source selections efforts:

- The role of purchasing in make-or-buy decisions.
- Compiling a source list of potential subcontractors.
- Obtaining an adequate competition environment.
- Selecting a method for determining subcontractors' capability-performance qualifications.
- Promoting attendance of potential subcontractors at solicitation conferences.
- Providing for the exchange of non-proprietary data and technology.
- Conducting price/cost analysis.
- The extent of involvement of the staff engineering personnel in the source selection process.
- Dealing with affiliates.
- Consideration of single-sole source development.
- Development of a price/quality philosophy for selecting subcontractors.
- Consideration of Government policies and contract clauses affecting selection of sources including those on source

approval, security, small business, labor surplus area and small disadvantaged business programs, and purchasing from foreign sources.

- Source selection board considerations.

**FOOTNOTES AND REFERENCES:**

1/ DoDD 5000 1, "Major and Non-Major Defense Acquisition Programs," 1 September 1987.

2/ "Establishing Competition," Program Manager's Notebook, DSMC. Fact Sheet 6.2.2. June 1985.

3/ FAR 6

4/ "Establishing Competitive Production Sources - A Handbook for Program Managers," DSMC. August 1984 ADA146 006. pp 6-10 & 6-11.

5/ AFSC/PK working papers on subcontracting management 1987

## CHAPTER 7.0

### CAPITAL INVESTMENT

#### 7.1 DISCUSSION

In 1984, an analysis of technology modernization at the subcontractor level was conducted by the Aeronautical Systems Division (ASD) of Air Force Systems Command. The study conclusions were documented in an ASD report entitled, "Blueprint for Tomorrow,"<sup>1/</sup> which stated the following in regard to subcontracting management and capital investment:

1. Subcontractors are not given the same capital investment opportunities that are given to prime contractors.
2. Subcontractors problems are more complex because of the additional market variables which they must deal with (e.g., over ordering by prime contractors, inability to forecast changing military requirement).
3. Subcontractors cannot meet delivery requirements due to inadequate production capabilities.
4. A subcontractor often supports multiple programs with many different products. This causes problems with delivery schedules and must be carefully taken into consideration when capital investment is planned for subcontractors.
5. The subcontractor is threatened by vertical integration. Vertical integration occurs when the prime contractor starts producing items normally produced by the subcontractor.

In addition, other studies have indicated that short term production contracts can adversely affect capital investment considerations. This impact is distinctly greater for small subcontractors than large prime contractors, due to their smaller manufacturing flexibility and funding capabilities.

A National Research Council study in 1986 indicated that contractors and subcontractors perceived DoD guidance on capital investment with the following concerns:<sup>2/</sup>

- They assumed that if their firms did not participate in the Manufacturing Technology (MANTECH) program and/or the Industrial Modernization Incentive Program (IMIP), they might not be considered for future contracts.
- They indicated that there appeared to be considerable confusion on their part regarding the relationships and differences among MANTECH and IMIP.
- Further, they postulated that the only personnel knowledgeable about the distinctions between the two programs were their Government administrators.

#### 7.2 MANUFACTURING TECHNOLOGY (MANTECH).

7.2.1 Background. MANTECH is defined in DoDI 4200.15 as: "Information that is, will, or may be used to define, monitor, or control processes and equipment used to manufacture or remanufacture DoD material."

The vehicle by which the information is organized and used to improve and reduce costs of DoD weapon systems is called the Manufacturing Technology Program (MTP). The MTP is defined in DoDI 4200.15<sup>3/</sup> as: "The total of all DoD investments specifically authorized by Congress for establishing new or improved manufacturing technologies." Supporting the MTP are levels of MT projects and tasks. The services promulgate guidance for the incorporation of MT initiatives into their individual weapon system acquisitions and contracts. As an example, the Air Force executes their MTP to achieve cost savings and

obtain maximum production efficiencies; to improve the overall quality and reliability of end products; and to reduce the need for critical materials and for the dependence on foreign goods.

7.2.2 PMO Requirements. Guidance for Air Force and Navy Program Managers is provided in the following directives:

- Air Force Reg 800-33<sup>4/</sup>,
- SecNav Inst 4800.11A<sup>5/</sup>,
- NavMat Inst 4800.36D<sup>6/</sup>, and
- NavAir Inst 4800.2<sup>7/</sup>.

7.2.3 Contractor/Subcontractor Requirements. Contractors and Subcontractors are encouraged continuously to improve their manufacturing technologies, and in many cases the pressures of competition have forced industry to become more efficient. The DoD will make MTP investments when the private sector is unable or unwilling to.

Industry also is required, through formal data submittals, to report on MT activities. These data then are compiled and forwarded by the services. For example, the data dissemination requirements which are followed when the Air Force contracts for MTPs provide for early release of contractor results for domestic use, while restricting export or foreign release of the technology.

7.2.4 Summary. The long term existence of the MANTECH program indicates that it is beneficial to both DoD and the Defense Industrial Base.

### 7.3 INDUSTRIAL MODERNIZATION INCENTIVES PROGRAM (IMIP)

7.3.1 Background. The Industrial Modernization Incentives Program (IMIP) was initiated as a means of improving the efficiencies of the acquisition process by encouraging industry to invest in factory wide improvements in exchange for the

government's willingness to offer incentives for these improvements primarily by the government assuming part of the investment risk, and by providing Productivity Savings Rewards (PSRs). PSRs are negotiated amounts that a contractor may earn by participating in IMIP.

The Air Force F-16 program was a prime example of IMIP whereby the Government invested \$25 million in serviceable plant equipment and the contractor invested \$100 million. The Government provided limited termination protection. The potential F-16 cost savings was calculated at \$370 million with the Air Force's share in excess of \$220 million. This and other examples are discussed in the 1986 National Research Council Study.<sup>2/</sup>

7.3.2 PMO Requirements. The effort to apply technology modernization at the subtier level requires a team effort between the Program Management Office (PMO), prime contractor and subcontractors.

The Air Force Systems Command (AFSC) was the forerunner in implementing IMIP at both the prime contractor and subcontractor levels. AFSCR 800-17<sup>8/</sup> describes AFSC's TECH MOD/IMIP and outlines implementation policies and procedures for weapon systems, subsystems, or equipment. (Projects initiated or on contract under the Air Force TECHMOD program are referred to as TECHMOD. Those initiated after DoD authorization of IMIP are called IMIP.) The Army and Navy do not currently have specific written directives regarding IMIP. Figure 7-1 shows the IMIP milestones and baseline adjustments which occur throughout the phases of the program.

7.3.3 Contractor/Subcontractor Requirements. The prime contractor acts as the Service's modernization representative to the subcontractor community. Large prime contractors, such as Pratt & Whitney and General Electric, often have

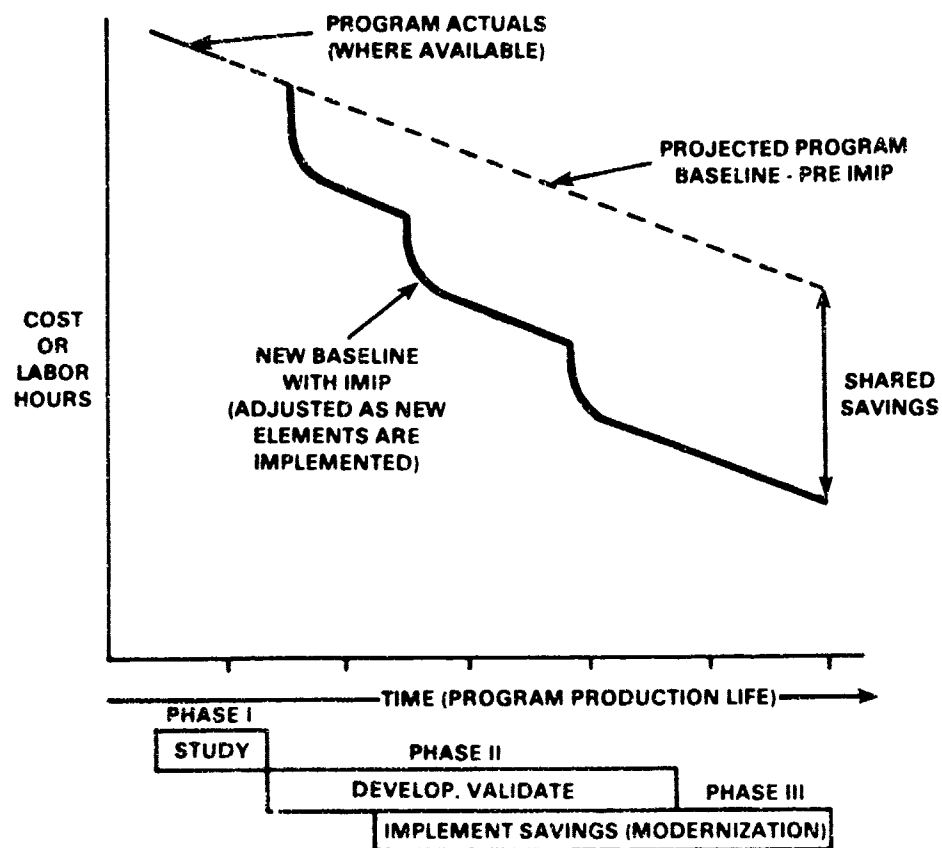


Figure 7-1. IMIP and Program Baseline Adjustments.<sup>9/</sup>

a separate Service contract to market IMIP to subcontractors who exhibit a potential to contribute to the Defense Industrial Base and surge capability. The prime contractors explain the IMIP process and Service requirements to the subcontractor. Subcontractors, who are interested and considered beneficial by the PMO, proceed into the three phases of the IMIP program.

The three phases are defined in the DSMC Manufacturing Handbook for Program Managers cited above as:

1. Analysis and Flanning. This phase consists of identification of high cost manufacturing areas, analyses, and dev-

elopment of initial approaches to improve factory manufacturing. Analyses are made of advanced manufacturing technologies, contemporary equipment, quality assurance, production control, and management information systems. Cost savings potential, return on invest and conceptual design of factory layouts required to implement specific improvements are developed.

2. Technologies. This phase includes establishing and validating enabling technologies which are voids in the manufacturing state-of-the-art that must be overcome to attain higher levels of factory integration. A detailed definition of factory enhancements and a plan for

accomplishing and implementing those into production must be developed.

3. Implementation. In this phase, detailed factory designs are completed and enabling technology programs are integrated into manufacturing operations. Advanced management information systems, manufacturing planning tools, and the cost analysis and performance assessment system are made ready for implementation.

7.3.4 Summary. The IMIP is unique in that there exists a business partnership between the Government and contractor with both parties sharing the risks and rewards. This differs from the more classical situation of the government customer and contractor supplier. The business partnership is a negotiation business agreement with both parties and the country as potential winners.

#### FOOTNOTES AND REFERENCES:

1/ Donald L. Brechtel, Major, USAF, "Subcontracting Management: A Frontier of Opportunity," Research Report No. AU-ARI-85-3, Air University, Maxwell AFB, June 1985, p. 40.

2/ "The Role of the Department of Defense in Supporting Manufacturing Technology Development," National Research Council, Manufacturing Studies Board, National Science Foundation, March 1986.

3/ DoDI 4200.15, "Manufacturing Technology Program," 24 May 1985

4/ AFR 800-53, "Manufacturing Technology Program," April 1982.

5/ SecNav Inst 4800.11A, "Manufacturing Technology Program," 30 Dec 1972.

6/ NAVMAT Inst 4800.36D, "Manufacturing Technology Program," 20 July 1979.

7/ NavAir Inst 4800.2, "Manufacturing Technology Program," 13 June 1977.

8/ AFSCR 800-17, "Technology Modernization (TECH MOD)," 1 November 1983

9/ "Manufacturing Management Handbook for Program Managers," Second Edition, DSMC, July 1984.

## CHAPTER 8.0

### PMO AND CAS TEAM APPROACH

#### 8.1 PROGRAM SUPPORT

##### Discussion/Objectives:

Both the Program Management Office (PMO) and the Contract Administration Services (CAS)/(CAO) organization are critical partners in the acquisition process. However, the PMO and the CAS view their tasks from different perspectives because of their responsibilities. The PMO is normally concerned with only one acquisition program, whereas the CAS is concerned with numerous programs for all the Services and the Defense Logistics Agency (DLA). Furthermore, the responsibilities and tasks of a CAS organization may vary according to agreed to tasks in Memorandums of Agreement (MOAs) or as assigned in Delegation Letters. A Service Plant Representative Office (PRO), for example, will be concerned with a contractor's management application and its consistency throughout the contractor's plants involving several different government contracts. Also, the (Service) PRO will be concerned that the contractor's products are in compliance with a program's contractual requirements. When the efforts of the PMO and the CAS are properly combined and coordinated, the chances that an acquisition program will be well managed are significantly improved and likewise risks will be reduced.

The PMO should ensure that all necessary requirements are specified in the program's prime contracts and that all necessary requirements, such as standards, specifications, terms and conditions are included in all applicable subcontracts. (This action is referred to as "flowdown.") The CAS must understand the responsibilities and authority delegated by the PMO and as required by the Federal Acquisition Regulation (FAR) plus have an understanding of the capabilities of the

contractors, both prime and subcontractors, involved in a program.

Successful contract management needs the expertise of both the PMO and the CAS, from the development of the program's acquisition strategy plan to the delivery of the last unit and contract closeout. A strong PMO-CAS team approach simply makes good business sense. Problems that could affect a smooth working relationship or jeopardize a single unified approach with the prime contractor must be identified, discussed, and quickly resolved in-house.

The PMO and the CAS should communicate with and evaluate the prime contractor's subcontracting and program management to ensure that the prime contractor manages in a preventive mode rather than a crisis or reactive mode. The PMO and the CAS should also ensure that the prime contractor monitors cost, schedule, performance, and supportability to preclude or reduce program risks and their impact on the acquisition program. Finally, to make sure that all government efforts are coordinated, the PMO and the CAS should keep involved component (Service) offices informed of significant developments, and especially those problems that could adversely affect the success of the program.

##### Application:

The PMO should take the lead in establishing and maintaining an integrated PMO-CAS team to effectively manage the system acquisition program. The PMO and CAS team responsibilities, authority and interfaces should be documented in a Memorandum of Agreement (MOA) or CAS Delegation Letters (see Section 8.2 below). The MOA and CAS Delegation Letters should be updated annually or more frequently if necessary to address program changes. It should be noted that

notwithstanding the delegation of responsibilities and authority through a MOA or CAS Delegation Letters, the PMO and more specifically, the Program Manager (PM) remains accountable for all program activities and requirements, and therefore must provide appropriate leadership to ensure the program is accomplished successfully in an efficient and effective manner.

#### Activities:

The PMO should ensure that the following actions are accomplished in accordance with Service directives:

- Advise CAS, including the (Service) PRO, about the PMO mission, organizational functions, interfaces, requirements and the need for coordination and cooperation.
- Periodically meet with the appropriate CAS organizations to identify new and revised requirements, assess contractor activities and future plans, discuss mutual problems and areas of risk, provide feedback, and identify future program changes and plans.
- Periodically, if agreed upon in the MOA, evaluate the performance of the CAS, and/or at least the (Service) PRO program manager, and submit the written evaluation to the Program Executive Officer (PEO) or Service Acquisition Executive (SAE) as appropriate.
- Actively involve the (Service) PRO in the review of waivers and deviations, and consider (Service) PRO recommendations for rejecting products that are not in compliance with contract requirements.
- Continual involvement, as appropriate, to ensure accomplishment of program specific activities, in such areas as:
  - Quality Assurance (QA),
  - Reliability and Maintainability (R&M),
  - Scrap, Rework and Repair (SRR),

- Work Measurement,
- Producibility,
- Waivers and Deviations,
- Manufacturing, and
- Cost and Schedule Control.

In regard to the above cited areas, the PMO should be cognizant of the activities of the subcontractors through the PMO's interfaces with the CAS and the prime contractor.

- In addition to the above, Air Force System Program Office (SPO), should also interface with the Air Force Contract Management Division (AFCMD) to ensure that the AFCMD is cognizant and involved in the acquisition program prior to the initial contract award and throughout the acquisition.

#### Impacts:

The consequences that can result if the above activities are not accomplished in an efficient and effective manner, are potential risk increases, possible degradation of program requirements, as well as cost and schedule impacts.

#### References:

See Figures 3-1 through 3-4.

## 8.2 MOAs AND DELEGATION LETTERS

#### Discussion/Objectives:

Many of the tasks required in an acquisition necessitate the joint participation of the PMO and the CAS. The tasks and responsibilities of joint efforts should be clearly delineated and documented in a Memorandum of Agreement (MOA) or Letters of Delegation. A MOA may be initiated by either the PMO or the CAS, whereas Letters of Delegation may be prepared by the Government Contracting Officer, in consultation with the PMO, and the CAS. In addition, CAS may issue internal Letters of Delegation assigning specified responsibilities to designated CAS offices.

Letters of Delegation should also be reviewed, updated and approved by the Government Contracting Officer or appropriate CAS official as applicable on an annual basis or more frequently if significant changes occur. However, the PM should ensure that the tasks and responsibilities are accomplished satisfactorily, since it is the PM who is ultimately responsible for the successful completion of the acquisition program.

#### Application:

A MOA should be developed when the tasks and responsibilities, including administrative arrangements, are complex, while a Letter of Delegation should be used for simple tasks and responsibilities.

Taskings other than the normal CAS functions specified in FAR 42 should be documented in a MOA or Letter of Delegation.

MOAs should be reviewed, updated and approved by both the PMO and CAS on an annual basis or more frequently if significant changes occur. In the event the prime contractor or any of the subcontractors are under the cognizance of a CAS organization or another Service, the PMO should endeavor to negotiate the tasks and responsibilities to the maximum extent possible and incorporate the responsibilities in a MOA or Letter of Delegation.

#### Activities:

There is no specific format or structure for either a MOA or a Letter of Delegation, however, an example of a generic MOA and a sample Letter of Delegation are presented in Appendix B and Figure 8-1 respectively.

The following topics are recommended as annexes for a MOA (see examples of annexes in Appendix B):

- Configuration and Data Management,
- Contract Administration,

- Engineering,
  - Integrated Logistics Support,
  - Manufacturing Operations,
  - Program Team Management,
  - Quality Assurance,
  - Subcontracting Management,
  - Surveillance of Cost and Schedule Analysis,
  - Test and Evaluation,
- and, if applicable -
- Flight Operations and Maintenance.

MOAs may be prepared to cover the tasks and responsibilities of multiple contracts and multiple programs.

In both the MOA and Letter of Delegation, be as specific as possible when delineating the tasks and responsibilities.

CAS component offices should normally be selected from DoD 4105.59-H, "DoD Directory of Contract Administration Services Components," as needed in the administration of the contracts. Exceptions may occur when a contractor's work site is on a military base. In this event, a component of a military command may be assigned to provide the necessary contract support.

#### Impacts:

As in any complex technical effort, the need for clear and concise assignments of tasks and responsibilities to individuals and organizations is essential to good business management. Failure to delineate the tasks and responsibilities or incorrectly assign tasks and responsibilities can increase the risks in accomplishing the program in a successful manner.

#### References:



**DEFENSE LOGISTICS AGENCY**  
**DEFENSE CONTRACT ADMINISTRATION SERVICES MANAGEMENT AREA, PHILADELPHIA**  
**POST OFFICE BOX 7699**  
**PHILADELPHIA, PENNSYLVANIA 19101-7699**

**SUBJECT:** Delegation of Production Support Surveillance and Reporting  
Contract # \_\_\_\_\_  
With: \_\_\_\_\_

**TO:**

1. The Production Support function on subject contract is hereby delegated to your office as the cognizant Government Representative covering the area of manufacture of the items/material to be furnished.

2. The work under this contract will be performed at:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. You are hereby requested to perform the following functions: Submit a DLA Form 1654 direct to the PCO, with copy to this office on all anticipated or actual delays. Submit DLA Form 1245 upon completion of contract. Mail reports to DCASMA  
PHI- \_\_\_\_\_ ATTN: \_\_\_\_\_ DCASR

4. Request you notify this office, ATTN: \_\_\_\_\_  
Symbol \_\_\_\_\_, the name, address, and telephone number of the Industrial Specialist assigned the responsibility for this delegation.

**FOR THE COMMANDER:**

**Figure 8-1. Sample Letter of Delegation.**

FAR 42.2  
 DFARS 42.203 and 42.204  
 DoD 4105.59-H  
 AFSC FAR Sup 42.2 and 42.3

### **8.3 DEFENSE PRIORITIES AND ALLOCATIONS SYSTEM (DPAS)**

#### Discussion/Objectives:

FAR 12.3 implements the Defense Priorities and Allocations System (DPAS) established by the Department of Commerce in support of authorized defense acquisition programs by providing priorities and allocations support. Priority ratings of either DX or DO and a program identification symbol are assigned to designated defense acquisition programs and such procurements take preference over all unrated purchases as necessary to meet required delivery dates. DX rated procurements take preference over DO rated orders. All procurement documentation directed to contractors, subcontractors and suppliers should contain the designations and ratings of the acquisition programs. Monitoring and enforcing the responsiveness is particularly essential at the lower tiers, where long lead times are critical and delays can severely impact on the production of the product being acquired.

The DPAS has three basic elements that are essential to the system's operation: (1) mandatory acceptance of rated orders is required unless rejected for authorized reasons; (2) mandatory extension of priority ratings throughout the acquisition chain; and (3) priority scheduling of production and delivery. The above three essential elements are applicable to contractors, subcontractors, vendors and suppliers involved in an acquisition program.

The PMO should establish a program's material priority so that the prime contractor has made adequate plans for acquiring the necessary systems, subsystems, components and material on a timely basis to meet the planned contract

schedule. The plan should ensure that adequate consideration is given to long-lead items and other potential problems such as subcontractors capacities and capabilities, and potential labor shortages. PMOs should request assistance from appropriate staff offices for priority case assistance and processing.

The CAS should ensure that the prime contractor has made every effort to obtain the required materiel before requesting priorities assistance from the Government. Once requested, the CAS will assist the contractors with their priorities and allocation responsibilities and will coordinate the requests with the PMO.

#### Application:

The material priority for the program should be established by the PMO as early in the acquisition process as possible and periodically reviewed and revised to meet the changing acquisition environment. Likewise, prime contractors should periodically meet with their subcontractors to determine if the established material priority is adequate to meet the needs of the program or if revisions are necessary. Subsequently, the prime contractor should meet with CAS and PMO to discuss the status and purpose on revisions necessary.

#### Activities:

PMO establish a material priority for the program in accordance with the Defense Priorities and Allocations System (DPAS).

Prime contractor develop a materiel acquisition plan to ensure that the contract will be accomplished as scheduled.

CAS ensure that the prime contractor makes every effort to acquire needed materiel prior to requesting assistance from the Government.

CAS, with the assistance of the PMO and appropriate staff office, upgrade the priority, if appropriate, or render other assistance as necessary to expedite and ensure that materiel is acquired in a

timely manner and thus preclude schedule slippages.

Contracting offices, with the assistance of the CAS, will process requests for special priorities assistance.

Impacts:

Delays in the receipt of systems, subsystems, components and material from suppliers and subcontractors can affect the prime contractor's program schedule. In addition, slippages in schedules can result in cost increases.

References:

FAR 12.3  
DFARS 12.302(70)  
DODI 4400.1  
AFSCR 78-2  
Dept of Commerce Reg 15 CFR 350

**8.4 PROBLEM IDENTIFICATION,  
RESOLUTION, AND STATUS  
REPORTING**

Discussion/Objectives:

The prime contractor's management of all subcontracts should be reviewed by the PMO and CAS, to ensure that adequate consideration has been given to cost, schedule, technical and supportability requirements. The review should ensure that in the prime contractor's management of subcontractors, the prime contractor has established an adequate surveillance and reporting system of the subcontractors performance so that problems and/or potential problems and status are reported to the prime contractor in a timely manner. The surveillance and reporting system should also include procedures for the prime contractor to provide such subcontracting performance data to the CAS and PMO so that Government assistance can be rendered if necessary.

Application:

PMO and CAS review the prime contractor's management approach to

subcontracted technical efforts as early as possible in the acquisition process, and subsequently, throughout the acquisition, monitor and periodically conduct reviews.

The PMO should ensure that during the make-or-buy program review (see Section 9.3), major/critical subcontract efforts are identified during the source selection (see Section 9.1) that should receive special management attention or require additional reporting considerations. Then, the PMO should continue to evaluate the critical efforts throughout the acquisition program to ensure that the special surveillance is increased or decreased as appropriate.

Activities:

PMO and CAS identify specific or potential problem areas in subcontracted technical efforts that require increased prime contractor management attention.

Have the Contracting Office incorporate in the contract the identification of major/critical subcontracts that require special surveillance and reporting by the prime contractor. Also, as appropriate, have the Contracting Office define the prime contractor's subcontract management responsibilities, including any special surveillance and reporting requirements in the contract.

Establish the exact manner, approach and extent of this surveillance with respect to specific subcontracts through negotiations and incorporate in the MOA.

Continually evaluate the major/critical subcontracted effort for special management attention throughout the acquisition process.

CAS maintain a close scrutiny of the prime contractor's subcontract management efforts, particularly in the identified problem areas. Assist the prime contractor in resolving problems and advise the PMO and Contracting Office on an exception basis of any significant deficiencies noted.

Evaluation of a prime contractor's ability to manage its subcontract work effort can normally be substantiated by:

- Organizational charts illustrating the interrelationships between the prime contractor's management organization and those of the subcontractors.
- The identification and description of necessary administrative and technical interfaces between the prime contractor and the subcontractor organizations.
- Descriptions of the prime contractor's methods and approaches for managing subcontract work effort and any special management emphasis and techniques that will be employed to ensure successful performance.
- Analysis data of the prime contractor's past experience in managing its subcontractors for other programs.

#### Impacts:

Failure to adequately identify potential and actual problem areas and to ensure resolution of such problem, can adversely impact on the successful accomplishment of an acquisition program. Potential or actual engineering, manufacturing, testing or other technical problems, and if not identified in a timely manner can result in both cost and schedule implications for a program.

#### References:

FAR 44.205  
AMC/TRADOC P 70-2, Chap. 19  
AFSC FAR sup 44.390-6  
AFR 70-16

### **8.5 COST AND PRICE REVIEW OF SUBCONTRACTOR PROPOSALS**

#### Discussion/Objectives:

The adequacy of the prime contractor's cost and pricing actions relative to subcontractor proposals should be evaluated

by the PMO and CAS. Subsequently, continuous evaluations should be conducted to ensure that the prime contractor effectively identifies potential or actual cost and pricing problems at subcontractors and the prime contractor takes appropriate and timely corrective action to resolve the deficiencies. In addition, the PMO and CAS should urge the prime contractor to conduct technical and cost risk analyses of subcontractors efforts and/or to request subcontractors to conduct such risk analyses for the prime contractor's information, as well as for the PMO and CAS. Also, the prime contractor should request alternate technical proposals, and proposals for off-the-shelf systems, subsystems or components to facilitate trade-off decision making.

#### Application:

Before awarding any subcontract or purchase order expected to exceed \$100,000 or issuing any modifications to such documents that would exceed the \$100,000 value threshold, a prime contractor or higher tier subcontractor that are required to submit certified cost or pricing data must also obtain similar certified data from their subcontractors.

Subcontractors are required by FAR to submit cost or pricing data to the prime contractor or the next higher tier subcontractor. If a subcontractor feels that the cost or pricing data is proprietary, the subcontractor must submit a claim for exemption.

Exceptions to the above requirement for certified cost or pricing data are:

- When subcontract prices are based on adequate price competition,
- When subcontract prices are based on established catalog or market prices of commercial items sold in substantial quantities to the general public, or
- When subcontract prices are set by law or regulation.

- When subcontract prices are based on established catalog or market prices of commercial items sold in substantial quantities to the general public, or
- When subcontract prices are set by law or regulation.

#### Activities:

The PMO and CAS should evaluate the cost and pricing data provided by the prime contractor including the data the prime contractor receives from the subcontractors.

The prime contractor and the higher tier subcontractors are responsible for:

- Conducting price analysis on the data received on subcontractors cost and price analysis, or in the event the subcontractors are unable to perform adequate analysis, to accomplish the analyses for the subcontractors.
- Submitting the results of subcontract reviews and evaluations as part of their own cost or pricing data submission that is included in their cost analyses before awarding any subcontracts.

The Contracting Officer may request audits or field pricing support from the CAS to analyze and evaluate the proposals of a subcontractor at any tier, irregardless of the availability of data or analyses performed by the prime contractor, if the Contracting Officer deems the audits appropriate in view of certain circumstances such as:

- The business relationship between the contractor and a subcontractor is not conducive to independent and objective analysis;
- The prime contractor is a sole source and subcontract costs or prices amount to a substantial portion of the total contract cost;

- The prime contractor or higher tier subcontractor is denied access to a lower tier subcontractor's records; or
- The size of the proposed subcontractor price, or subcontracts at any tier that are considered critical to an in-depth analysis of the prime contractor's proposal.

Contracting Officer request: for cognizant CAS or auditor assistance to review a subcontractor's cost estimates, should include, when available, a copy of any review prepared by the prime contractor or higher tier subcontractor, the subcontractor's proposal, cost or pricing data provided by the subcontractor, and/or the results of the prime contractor's cost or price analysis. A summary of the analysis of the subcontractor's cost or pricing data conducted by the Contracting Officer and/or CAS should be provided to the prime contractor or higher tier subcontractor, with the consent of the subcontractor reviewed. In the event a subcontractor withholds consent, the Government should provide the prime contractor or higher tier subcontractor with a range of unacceptable costs for each item in such a manner as to not furnish any subcontractor proprietary data.

#### Impacts:

Acceptance of cost and pricing data without adequate review and analyses can result in unwarranted procurement cost escalations and subsequent justifiable criticisms of the inadequate management of the acquisition program. Serious cost and pricing inaccuracies could jeopardize subsequent funding of the program.

#### References:

FAR 15.805-5(i)-(k) and 15.806

### **8.6 TECHNICAL REVIEW OF SUBCONTRACTOR PROPOSALS**

#### Discussion/Objectives:

The PMO and CAS should ensure that Request for Proposals (RFPs) and Request for Quotations (RFQs) issued to subcontractors by the prime contractor or higher tier subcontractors contain the selection criteria and detailed technical requirements so that subcontractor selections are not made on the basis of cost or price alone. In this regard, the PMO and CAS should ensure that the flow down of prime contract specifications and standards are adequate for the needs of the program and for the subcontractors understanding of the program requirements.

Application:

Prior to the issuance of RFPs and RFQs to subcontractors, the PMO and CAS should review and evaluate the prime contractor or higher tier subcontractors proposed/drafted documents to ensure that appropriate prime contract specifications and standards are flowed down to subcontractors. (Also see section 9.12). Proposed/drafted RFPs and RFQs of higher tier subcontractors should be provided to the prime contractor, who in turn should provide the documents to the PMO and CAS for technical review.

Activities:

The prime contractor should review the Government's contract to ensure that all applicable specifications and standards are included in their RFPs and RFQs, as well as those of higher tier subcontractors, for any subcontracted efforts.

Subsequently, the prime contractor should provide the results of their review and the proposed/drafted RFPs and RFQs to the PMO and CAS for their review. Through an iterative process, recommendations for revisions should be incorporated in the proposed/drafted RFPs and RFQs, reviewed and finally approved by the PMO and CAS before the RFPs and RFQs are issued.

Impacts:

Inadequate reviews of technical aspects of subcontractor proposals by the prime contractor, the PMO or CAS can result in: unsatisfactory materiel being produced or supplied that does not meet the required specifications or standards; manufacturing and assembly delays; increased scrap problems with the need for increased quality control; and cost and schedule impacts.

References:

DoD 4245.7-M, pp. 5-12 & 5-13  
 DoDD 4120.21  
 DoDD 4155.1  
 DoDI 4155.20  
 DoDD 5000.40  
 DoDI 5010.12  
 DoDD 5010.19  
 AR 70-17  
 AR 702-3  
 AMC R 700-6  
 AMC R 702-6  
 AMC R 715-3  
 AMC P 702-13  
 AMC P 715-2  
 AFR 70-16  
 AFR 74-1  
 AFR 800-2  
 AFR 800-18  
 AFR 800-37  
 AFSCR 84-2  
 AFSCP 84-4  
 AFSCP 800-3  
 AFSCR 800-21  
 AFCMDR 74-1  
 AFCMDR 800-1  
 NAVMAT 4355.69A  
 NAVMAT 4855.10  
 NAVELEX 4120.14

## CHAPTER 9.0

### CRITICAL SUBCONTRACTING ASPECTS

#### 9.1 SOURCE SELECTION

##### Discussion/Objectives:

Source selection as viewed from the perspective of subcontracting must provide for methodologies to ensure that any mandatory subcontracting requirements are properly addressed and also that those subcontracting action proposed are in the best interests of the government.

##### Application:

Any acquisition, regardless of size or value, has the potential for including subcontracting which requires evaluation. There are three primary considerations when looking at proposed prime contractor subcontracting proposals:

- Reasonableness of the subcontracting action,
- Reasonableness of the proposed subcontract cost as evaluated by the prime contractor, and
- Adequacy of the prime contractor management approach.

##### Activities:

Activities included with the review selection aspects of subcontracting include:

- RFP preparation,
- Source Selection Plan development,
- Review of the prime contractor's subcontract management plans and procedures, and
- Review of contractor's past performance in subcontract management.

##### Impacts:

Failure to properly plan for the thorough evaluation of subcontractor selection can result in a compounding of problems. Not only is the Government the ultimate user of the products and services, but there is no direct contractor relationship between the Government and the subcontractor.

##### References:

FAR 44.2  
DFARS 44.3  
AFSC FAR Sup 44.390-6

#### 9.2 FLOWDOWN OF SPECIFICATIONS, STANDARDS, TERMS AND CONDITIONS

##### Discussion/Objectives:

The flowdown of Terms and Conditions (T&C) takes the form of those T&Cs which are required by law or regulation, and those that the purchasing activity, after careful review, want to ensure are passed down to subcontractors. This is necessary because, except in cases where a prime contractor acts as an agent for the Government, there is no contractual relationship between the Government and the subcontractor.

##### Application:

The flowdown of specifications, standards and terms and conditions are applicable to all subcontracts. Standards and specifications are necessary for the procurement of proper goods and services, and terms and conditions protect not only the prime and subcontractor, but also the Government. Of particular importance is the proper flow down of Quality Assurance (QA) provisions.

Activities:

The following are major activities which are performed to ensure proper flowdown of standards, specifications, terms and conditions:

- During RFP preparation, identify mandatory clauses,
- Identify tailored specifications and standards which must be included in the event of subcontracting, and
- Work closely with the CAS organization regarding potential bidders and contractors, to identify areas of potential weakness.

Impact:

Failure to ensure adequate flowdown puts the Government in the position of having to perform the job for which the prime contractor has been paid, and also open the way for potential (and expensive) contract changes in order to invoke the missing specifications and standards.

References:

FAR 44.204  
FAR 52.244  
AFSC FAR Sup. 52.244-9000

**9.3 MAKE-OR-BUY PROGRAM**Discussion/Objectives:

Make-or-buy programs and acquisition specific make-or-buy plans are critical in the establishment of candidate sources for subcontracting and also to show that the contractor has used good judgment in identifying what systems, subsystems, or components are to be developed and/or built by the contractor and its affiliates (make) and those which are to be obtained elsewhere (buy).

Application:

Make-or-buy programs are required for all negotiated acquisitions with an esti-

mated value of \$2 million or more and may be required for those less than \$2 million if the contracting officer determines that the information is necessary. The program is not required when the contract:

- is for R&D with no significant hardware follow-on, and
- is based on adequate price competition, commercial quantity prices or has prices set by law or regulation, the program normally is restricted to complex, costly, or high quality items which require management review. Generally, the program does not include work on items which are less than 1% of the total contract value or, for the Department of Defense, or less than \$500,000.

Activities:

Develop solicitation requirements, and evaluation criteria. When evaluating a contractor's make-or-buy program the following partial list of FAR items should be considered:

- Is Government involvement required?
- What is the impact on indirect rates due to workload?
- What is the degree of contractor commitment to small and small and disadvantaged businesses?
- Were labor surplus considerations made?
- Have all "make" items normally been produced by the contractor?
- Can proposed "make" items be procured elsewhere in a cost effective timely manner?

Impacts:

The approval and implementation of a flawed make-or-buy program will have

serious consequences in direct proportion to the technical and schedule risks involved. Technical and schedule problems quickly become cost problems which in turn divert scarce dollars.

#### References:

FAR 15.7  
DFARS 15.709-706

### 9.4 INTERORGANIZATIONAL TRANSFERS

#### Discussion/Objectives:

The term, "Interorganizational Transfers", (IOTs) is used to describe materials, supplies or services provided by a segment or division of the activity performing the prime contract. Other terms in common usage include Interdepartmental Transfers (IDTs), Interdivisional Issues (ISIs), or Interdivisional Work Authorizations (IDWAs). IOTs must be viewed as subcontracts with particular attention being given to the optimal division of work.

#### Application:

IOTs may be proposed for any type of contract, but it becomes increasingly critical as the risk of the program increases. There is a tendency for a contractor to be overly optimistic about his company's capabilities when faced with a relatively cost equal competition between an internal organization and a true subcontractor.

#### Activities:

Emphasis must be placed on the following aspects of IOTs and IOT management:

- View proposed IOTs in the context of another make-or-buy decision,
- Be particularly aware of the degree of risk involved and how familiar the proposed performing segment is with doing the work, and

- Assist in the review of IOT management in accordance with SI-307.2 of DAR Supplement No. 1.

#### Impacts:

Inappropriate use of IOTs can have the same effect on a program as a poorly chosen subcontractor, with the exception that an IOT which begins to get into trouble may respond to increased management pressure better than a critical subcontractor.

#### References:

FAR 15.804-6  
DAR SUP 1, SI-307.2

### 9.5 SUBCONTRACT COMPETITION

#### Discussion/Objectives:

Competition at the subcontract level is a powerful tool by which a prime contractor can structure the best proposal and ultimately deliver the best product to the Government. The Government has the responsibility to assure that the prime contractor has complied with all completion requirements as stated in the contractor's subcontracting and/or make-or-buy plans and with contractual provisions.

#### Application:

Competition is always the preferred method of arriving at a selection of a source based upon 10 U.S.C. 2304 and 41 U.S.C. 253 with the exception of conditions cited in FAR 6.200 and 6.300. These exceptions include:

- Maintaining alternate sources,
- Small Business and Labor surplus set asides,
- Single available source,
- Urgency,
- Industrial mobilization,

- International Agreement,
- Authorized by statute,
- National Urgency, and
- Public Interest.

These conditions apply to contracts executed by the Government but the requirements which are placed upon the prime contractor to achieve competition should follow United States policy to promote competition.

#### Activities:

The PMO and the CAS component both must direct their attention towards competition in subcontracting by:

- Structuring RFP requirements,
- Review and approval of Subcontracting Plans,
- Emphasizing subcontracting competition in the granting of consent to subcontract (CAS function), and
- Stressing competition in the conduct of Contractor Purchasing System Reviews (CPSR).

#### Impacts:

Competition in subcontracting when coupled with truly responsible sources can improve the performance of the prime contract and ultimately the benefit of the Government.

#### References:

FAR Part 44  
 FAR 6.100, 6.200, 6.300  
 DoDD 4245.9  
 AFR 800-35

### **9.6 RIGHTS IN TECHNICAL DATA AND COMPUTER SOFTWARE**

#### Discussion/Objectives:

The issue of rights in technical data and computer software has become more complex with the introduction in 1987 of a new class of data rights called, "Government Purpose License Rights." The Government acquires only those rights that it requires to meet its needs.

#### Application:

Any contract which requires the delivery of data or computer software has the potential for data rights issues. It is DoD policy that prime contractors not be permitted to use their power to award contracts as a lever to acquire subcontractor data. Therefore, subcontractors may be permitted to submit data directly to the Government.

#### Activities:

The PMO, PCO and CAS components need to be aware of the following activities leading up to the final receipt of technical data and computer software:

- Identification of potential data which may be delivered with restriction,
- Requirement to flow down data rights clauses,
- Identification of the minimum Government needs,
- Review of data rights clauses in subcontracts received for consent review,
- Awareness of data marking legends and validation procedures,
- Knowledge of the three classes of data rights which are UNLIMITED RIGHTS, LIMITED RIGHTS, and GOVERNMENT PURPOSE LICENSE RIGHTS,
- Knowledge of the term RESTRICTED RIGHTS which applies only to computer software,

- Knowledge of the content requirements of the data,
- Knowledge of the flexibility permitted contractors and subcontractors as a result of data tailoring and the use of contractor formats,
- Review of the content of the technical data which is delivered by the prime contractor, and
- Review of the system used by the prime contractor to review subcontractor data for compliance with requirements.

#### Impact:

Failure of the Government to obtain technical data and computer software with inadequate rights can hamper system operation, maintenance and reprourement activities. It is vitally important that sufficient rights in technical data be received to permit competition reprourement in all possible cases.

Data which is ultimately received by the Government must not only be useable from the data rights perspective, but also useable from content. If either of the two requirements (rights and utility) are not met, the acquisition is most likely to suffer.

#### References:

DFARS Part 27, 27.4  
 AFSC FAR Sup. 27, 27.4  
 AFR 800-34  
 AFSCR 800-16/AFLCR 800-16/AMC R  
 715-510/SECNAV NOTE 4210/DLAR  
 8400.3  
 AFSCP 800-18/AFLCP 800-18/AMC P  
 715-15/NAVSO P-3650/DLAH 8400.1.

## 9.7 PATENT RIGHTS

#### Discussion/Objectives:

Patent rights are different from rights in technical data not only from the U.S. Code that specifies the legal aspects, but

also in the practical use that is made of the end product. Data is required by many people in many areas of system acquisition and maintenance. Patented items are often an outgrowth of a contract which is being performed for a different purpose, or patented items may be used in the performance of a contract. The Government's policy is to encourage the commercialization of patents developed under contract performance. The Government will not normally refuse to award a contract on the grounds that a prospective contractor may infringe a patent in the performance of a contract.

#### Application:

Patent rights clauses specified in FAR 27, 27.303 shall be included in Research and Development contracts. The three contract clauses are:

- Patent Rights - Retention by the Contractor (Short Form),
- Patent Rights - Retention by the Contractor (Long Form), and
- Patent Rights - Retention by the Government.

The Government, as with data rights, seeks the minimum rights commensurate with need. These needs are normally achieved by obtaining a license to use the invention or in cases where the contractor does not properly obtain title, the Government may.

#### Activities:

The PMO, PCO and CAS components need to be aware of the following patent related activities:

- Identification of patent clauses which are required, including the requirement of DFARS 27, 27.304-4 which requires the insertion of the Patents - Subcontracts clause in solicitation and contracts which include the "Patent Rights - Retention by the Contractor (Short Form)" Clause.

- Be aware of the concept of Authorization and Consent whereby the Government may authorize the use of an invention in the performance of a contract. In the event a patent holder files suit for infringement, he can only bring suit against the Government and not against the contractor or subcontractor.
- Monitor the periodic reports submitted by the contractor and subcontractor which address potential patents.

#### Impacts:

In a practical sense the issues of patents and patent rights are well monitored by Contracting Offices and Patent Counsels. PMOs must be aware of contractor responses to patent clauses so as to assist in technical reviews and to assess future Government uses.

#### References:

FAR 27  
DFARS 27, 27.304  
AFSC FAR Sup 27.305

### 9.8 SUBCONTRACT MANAGEMENT PLAN

#### Discussion/Objectives:

The subcontract management plan developed by the contractor must be in support of the overall make-or-buy program, the corporate purchasing system, and the requirements for subcontracting required by small business, small disadvantaged business, and labor surplus area requirements.

#### Application:

A subcontract management plan should always be available in order that the Government may fully understand how the contractor plans to control the subcontracting effort for a specific contract action. When a major systems acquisition

is involved, a more detailed and contract-specific plan is required.

#### Activities:

The subcontract management plan must be reviewed by the PMO and CAS component to ensure that it accurately reflects the management techniques needed to maximize the likelihood of a successful subcontract effort, given the character of the acquisition.

Some of the characteristics of the acquisition which will determine the comprehensiveness of the subcontract management plan include:

- Size of the contract/acquisition,
- Degree of new research and development,
- Past performance of potential subcontractors,
- Schedule constraints, and
- Interface complexity of equipments/systems provided by the prime and potential subcontractors.

The more complex the acquisition, the more critical the schedule, or the larger the number of equipment and/or system interfaces, the more comprehensive must be the subcontract management plan.

#### Impact:

If the subcontract management plan is deficient, the likelihood that the subcontract and subcontractor performance will also be deficient also increases. The plan itself is not the issue, but the performance of the subcontractor is. However, a well thought out subcontract management plan will materially increase the chances of corresponding good performance.

#### References:

FAR 44.3

AFSC FAR Sup. 52.244-9000/9001

### 9.9 SUBCONTRACTING PLAN (Small Business and Small Disadvantaged Business)

#### Discussion/Objectives:

It is the policy of the United States as stated in FAR 19.702 that, "any contractor receiving a contract for more than \$10,000 shall agree in the contract that small business concerns and small disadvantaged business concerns shall have the maximum practicable opportunity to participate in contract performance consistent with its efficient performance."

#### Application:

In addition to the policy cited above, a subcontracting plan is generally required for negotiated contracts which are expected to exceed \$500,000 (\$1,000,000 for construction). Plans are not required from small business firms, for contracts being performed entirely outside the United States, or contracts which do not include an enacting utilization clause.

#### Activities:

The PMO and the CAS component should be involved in the review of any plans submitted and the CAO is responsible for reviewing the compliance with the plan after award. The plan should be reviewed looking for the following points:

- Percentage goals for small and small disadvantaged concerns; and other minority institutions as subcontractors,
- The name of the plan administrator,
- A description of how the small businesses will have an equal opportunity to participate,
- Assurance that subcontractors offer further opportunity for subcontracting and subcontracts will contain appropriate flow-down clauses,

- Assurance that the contractor will keep appropriate records and participate in studies of subcontracting, and
- Discussion of reports to be submitted and records to be maintained.

#### Impact:

These plans are required by legislation and regulations, and properly structured programs may be of benefit to the Government both in terms of furthering economic goals and in obtaining qualified firms to participate in acquisition.

#### Reference:

FAR 19.7

### 9.10 LABOR SURPLUS SUBCONTRACTING PROGRAM

#### Discussion/Objectives:

Labor surplus activities are designed to improve the utilization of appropriate labor in areas which have been designated as labor surplus by the U.S. Department of Labor.

#### Application:

Contractors with actions which exceed small purchase limitations from Part 13 of the FAR, but are less than \$500,000 are required to use their "best efforts" to place subcontracts with appropriate firms in labor surplus areas. In acquisitions which exceed \$500,000 the contractor is required to "take affirmative action" to place rush subcontracts.

#### Activities:

The PMO and CAS organizations should review the proposed contractor's plans for utilization of surplus labor.

#### Impact:

Care must be taken to ensure that the programs are being implemented in accordance with the FAR, particularly

with respect to the two restrictions on the use of surplus labor, that is that prices paid are no higher than obtainable elsewhere and that the use of surplus labor must be consistent with the efficient performance of the contract.

References:

FAR 20.3

**9.11 EQUAL EMPLOYMENT OPPORTUNITY (EEO) CLEARANCE**

Discussion/Objectives:

Executive Order 11246 provides the requirement that the Equal Opportunity Clause be included in all Government contracts and subcontracts not exempted by law or regulation.

Application:

Certain clauses of contract which are cited in FAR 22.807 are exempt from Equal Opportunity Compliance. Examples of contracts/subcontracts which are exempt are:

- Single transaction less than \$10,000,
- Work contracted outside the U.S., and
- Work on or near an Indian reservation.

Activities:

The PMO and the CAS components must verify that proper EO clauses are included in solicitations and resulting contracts and, be aware of any complaints or adverse actions which have been taken against contractors or subcontractors.

Impact:

Awareness, knowledge, and full support of EO provisions is a requirement for all Government Agencies and firms doing business with the Government. Firms which are found in noncompliance are subject to contract termination, suspension, debarment and other sanctions found

in FAR 22.809. All procurement personnel should be aware that complaints of violation of Executive Order 11246 are referred immediately to the Director of the Office of Federal Contract Compliance Programs (OFCCP), United States Department of Labor. Furthermore, the contractor who is subject to the complaint shall not be advised of the complainant's name, the nature of the complaint, or the fact that the complaint was received.

References:

FAR 22, 22.8

**9.12 SUBCONTRACT KICKBACKS**

Discussion/Objectives:

FAR 3.502.1 defines "kickback" as: "... any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract. 'Person,' as used . . . means a corporation, partnership, business association of any kind, trust . . ."

It is vital that every possible effort be expended to ensure the integrity of the procurement process. The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) was enacted to curb improper payments relating to awards.

Application:

The FAR Clause 52.203-7, "Anti-Kickback Procedures," must be included in all solicitations and contracts.

Activities:

All procurement personnel must be aware of the prohibition against improper activities which may be construed or appear to be subject to the procedures. Further, they should be aware of the authority of the Contracting Office to direct withholding of funds to be paid by prime

contractor to subcontractors and to offset kickback amounts against monies owed by the United States to a prime contractor.

Further, the PM and the PMO staff, contracting office personnel, as well as any other government personnel must be cognizant of the Service's ethics program and must be rigidly ethical in all their dealings with contractors and contractor personnel.

Impact:

Any breach of contractual integrity can jeopardize the successful completion of a contract or acquisition.

References:

FAR 3.502  
DAR SUP 1

### 9.13 PROGRESS PAYMENTS

Discussion/Objectives:

Before a prime contractor makes progress payments to subcontractors, the prime contractor should verify that the work or interorganizational transfers have been accomplished and the costs incurred. The CAO should ensure that these two critical areas of accomplished work and costs incurred are closely monitored. Further, the CAO should ensure that adequate control systems are effectively implemented and functioning to preclude overpayments of subcontractors that could be passed on to the Government through the processing of prime contractor progress payments.

Application:

Progress payments may be used for subcontracts in the same situation as used for prime contracts. Only fixed price type subcontracts may include progress payments. It is policy as stated in FAR 32.504 to encourage contractors to structure progress payments to subcontractors which conform to the FAR

guidance for the prime contractor's customary payment.

Activities:

The CAO should ensure that the prime contractor verifies work accomplished, costs incurred on subcontracts and interorganizational transfers for progress payments and should validate which subcontractors qualify for receiving progress payments and should ensure that the terms for such payments meet the standards of FAR 32.502-1. Also, the CAO should ensure that the prime contractor has installed the necessary control systems, including internal audit procedures, to ensure that subcontractors are not overpaid, as such overpayments could be passed on to the Government through the processing of prime contractor progress payments. The prime contractor must also fully document these payments when they are included in the prime contractor's requests for payment from the Government.

Impact:

The smooth flow of progress payments is generally a requirement for both small and large businesses, and interruption of payments can cause substantial problems for firms of all sizes.

References:

FAR 32  
FAR 32.502-1  
FAR 32.504

### 9.14 TERMINATION SETTLEMENTS

Discussion/Objectives:

Terminations of contracts may be undertaken for reasons of convenience of the Government or for default. The critical issue here, aside from the fact that a contract action has been slipped, is the evaluation of the work in process, and the work the Government wants the contractor to complete.

Application:

The same FAR guidance which apply to termination of prime contracts also apply to the termination of subcontracts by the prime contractor. Any contract (and subcontract) which provides for termination by default or for convenience is subject to this guidance.

Activities:

The CAO is responsible for the issuance of a Notice of Termination. The Termination Contracting Officer (TCO) is responsible for negotiating a sellout with the prime contractor. The prime contractor will act in the same manner with any terminated subcontractor. The TCO, CAS components, and PMO representatives are responsible for the determination of completed work and the extent that the settlement proposal which is submitted by the contractor is to be evaluated and negotiated. FAR 49.105 defines the specific duties of the TCO.

Impact:

It is critical that terminations are settled quickly to minimize disruption to the contractor and subcontractors work forces, and to permit the PMO to restructure the balance of the work if required.

References:

FAR 49

**9.15 SUBCONTRACTOR PROGRAM  
STATUS REPORT**

Discussion/Objectives:

The prime contractor bears the responsibility for management of its subcontractor, and therefore, should include status reports on their activities in the prime contractor's routine and exceptional reporting. The ACO also has responsibility (unless withheld) for monitoring and reporting the prime contractor's management of subcontractors, and if so re-

quested, perform supporting subcontract monitoring.

Application:

Every acquisition and contract which requires subcontractors also requires a method or procedure for monitoring subcontractor performance.

Activities:

The CAO personnel who are involved with subcontract monitoring will coordinate and consolidate reports to the PCO and PMO the status of subcontract activities. These reports will normally be used to alert the PCO and PMO personnel of deficiencies, problems, or progress which require corrective action or review.

Impact:

Subcontract reporting is really an integration of all activities and individuals responsible for monitoring subcontract activities and cogent presentations of their findings. Prompt response from the PCO or PMO personnel is necessary to ensure the process produces positive results.

References:

FAR 42.201

## CHAPTER 10.0

### CRITICAL ACQUISITION ASPECTS

#### 10.1 SURVEILLANCE

##### Discussion/Objectives:

Efficient and effective management of subcontractors by the prime contractor is essential to the accomplishment of a successful acquisition program. To ensure that the prime contractor is performing the management function adequately and the subcontractors performances are being accomplished in a satisfactory manner, the PMO and CAS should monitor these efforts through reviews, analyses and visits to the prime contractor and subcontractors' plants and facilities.

##### Application:

Periodically, throughout a program and as circumstances dictate, both the PMO and the CAS should monitor subcontractors performance and prime contractor management of subcontractors.

Indices for subcontractors performance should be developed and used by in the prime contractor's evaluations and analyses.

##### Activities:

The PMO should regularly monitor subcontractors performance and prime contractor management of subcontractors through reviews and analyses of prime contractor reports, attendance at prime contractor management and technical meetings, reviews at subcontractor facilities and visits to subcontractor plants. Reviews and visits to subcontractor facilities and plants must be coordinated with the CAS and approved by the prime contractor.

The CAS should also monitor subcontractors' performance and prime contractor management of subcontractors on a

regular basis through observations of the prime contractor's day-to-day operations and management of subcontractors. In addition, the CAS should:

- Review and analyze the prime contractor's subcontracting management procedures and changes thereto,
- Review and analyze data received from supporting CAS requests.
- Evaluate the results of the prime contractor's analysis of subcontractors' performance indices and data.

Specific references to a Subcontract Management Plan and subcontract management should be included in the Government's contract with the prime contractor. In this regard, it is recommended that the Army and Navy Contracting Officers consider using the two applicable clauses cited below which are used by the Air Force and cited in the AFSC FAR Supplement:

- Clause 52.244-9000 Subcontract Management Plan, and
- Clause 52.244-9001 Subcontract Management.

The clauses can be modified to meet individual Service needs.

##### Impacts:

Not monitoring the prime contractor's management of subcontractors, or the subcontractors' performance in a timely manner could result in significant adverse program impacts such as production stoppages or delays that could cause cost overruns and/or schedule slippages. Such impacts could be precluded or at least reduced with proper and timely surveillance.

References:

DoD 4245.7-M, pp. 5-12 & 5-13  
 DoDD 4155.1  
 DoDI 4155.20  
 AR 70-17  
 AMC R 700-6  
 AMC R 702-6  
 AMC R 715-3  
 AMC P 702-13  
 AFR 70-16  
 AFR 74-1  
 AFR 800-2  
 AFR 800-37  
 AFSCR 84-2  
 AFSCP 84-4  
 AFSCP 800-3  
 AFSCR 800-21  
 AFCMDR 74-1  
 NAVMAT 4355.69A

**10.2 QUALITY ASSURANCE**Discussion/Objectives:

The PMO and the CAS should ensure that the prime contractor includes the appropriate quality management/control systems and technical requirements in all the subcontracts and that such requirements are flowed down through lower tier subcontracts. Contractual quality requirements should be tailored for each applicable subcontract, including such items as product design, inspection, production and product integration.

Application:

Government contract Quality Assurance (QA) on subcontracted efforts should only be performed when determined necessary and in the Government's interest, otherwise it should be the prime contractor's responsibility to ensure that a Quality Assurance (QA) program is implemented and functioning at the prime contractor and the subcontractor levels.

Any Quality Assurance (QA) efforts conducted by the CAS or appropriate Service QA commands does not relieve the prime contractor of any responsibilities under the contract.

Activities:

The contracting office should ensure that appropriate requirements for the prime contractor's control of quality for the prime contract and all related subcontracts are included in the prime contract.

The PMO and CAS should ensure that efficient procedures are developed and applied when Government contract Quality Assurance actions are required or necessitated under the contract.

The CAS should maintain records that indicate the following:

- The nature of the Government contract Quality Assurance actions, including when appropriate, the number of observations made and the number and type of defects, and
- Decisions regarding acceptability of the system, subsystem, component, material, process and the requirements, as well as the corrective action taken to rectify the defects.

Also, the CAS should make recommendations regarding the contract, specifications, guidance or other requirements that would result in more effective operations or eliminate unnecessary costs.

In accordance with MIL-Q-9858A, the prime contractor as well as the higher tier subcontractors should ensure that an effective quality control operation is in place and functioning continually throughout the contract. In addition, the prime contractor should ensure that:

- Only those products that conform to contract requirements are submitted for the Government's acceptance.
- Records containing substantiating evidence, when required by the contract, are maintained and provided to the Government, if requested. Such records should validate that the products delivered to the Government

conform to the contract quality requirements.

- An inspection system or program for the control of quality is maintained, if required, and that it is acceptable to the Government.
- All the inspections and tests required by the contract are performed, with the exception of those specifically reserved for performance by the Government. Inspections should be accomplished in accordance with MIL-I-45208A.
- Timely arrangements are made for Government access to subcontractors' facilities, when requested.

The Government should perform Quality Assurance at the subcontract level when:

- An item is to be shipped from the subcontractor's plant to the prime contractor or higher tier subcontractor and inspection at the source is required,
- The conditions for Quality Assurance at the source are applicable,
- The contract specifies that certain Quality Assurance functions, which can be only performed at a subcontractor's plant, are to be performed by the Government, or
- It is otherwise required by the contract or determined to be in the Government's interest.

#### Impacts:

Inadequate Quality Assurance (QA) programs and the inadequate management of QA programs can result in rejected systems, subsystems, components and material and thus increase costs and require schedule extensions. In addition, inferior or nonconformance to contract requirements can also affect safety, health, reliability, durability, performance, interchangeability of parts or assemblies,

weight, or any other basis objective of the system's specifications.

#### References:

FAR 46  
DFARS 46  
DoDD 4120.21  
DoDD 4155.1  
AMC R 700-6  
AMC R 702-1D  
AMC R 702-6  
AMC P 702-13  
AFR 74-1  
AFSCR 74-1  
AFCMDR 74-1  
AFCMDR 540-16  
NAVMAT 4355.69A  
NAVMAT 4855.1A  
NAVMAT 4855.10  
MILSPEC-Q-9858A  
MILSPEC-I-45208A

### 10.3 VENDOR QUALITY SURVEYS

#### Discussion/Objectives:

To ensure that the prime contractor conducts vendor quality surveys in a satisfactory manner, the CAS should participate in the surveys so as to determine that the Quality Assurance (QA) programs of vendors and suppliers satisfy all technical and contractual requirements of subcontracts and purchase orders.

#### Application:

Vendor quality surveys should be conducted periodically throughout the term of the prime contract by the prime contractor.

The extent of in-depth evaluation of the survey will depend on whether the items being purchased are off-the-shelf, specifically developed for the acquisition program, or depending on the degree of development required such as Non-Development Items (NDIs).

#### Activities:

The CAS should participate in prime contractor quality surveys of vendors and suppliers. The surveys should evaluate the Quality Assurance (QA) programs to ensure that the programs:

- Encompass all quality and technical requirements for the product being delivered.
- QA guidance is tailored specifically for each acquisition and quality requirements comply with the acquisition program's specifications and standards are clearly stated.
- Emphasis on organizational focus on meeting the acquisition program requirements.
- Emphasis design practices and reviews that will provide product assurance.
- Delineate testing procedures to demonstrate the attainment of the acquisition program requirements.
- Are cost effective.

The CAS should periodically apprise the PMO and appropriate QA staff offices regarding the results of the vendor quality surveys.

#### Impacts:

The vendor quality surveys promote Quality Assurance awareness at the lower tiers of the subcontracted effort and those of the vendors for all levels. This awareness can improve the quality of the products and items acquired or purchased and thereby reduce the amount of risk in the acquisition process.

#### References:

FAR 46  
DFARS 46  
DoDD 4120.21  
DoDD 4155.1  
AMC R 700-6  
AMC R 702-1D  
AMC R 702-6

AMC P 702-13  
AFR 74-1  
AFSCR 74-1  
AFCMDR 74-1  
AFCMDR 540-16  
NAVMAT 4355.69A  
NAVMAT 4855.1A  
NAVMAT 4855.10  
MILSPEC-Q-9858A  
MILSPEC-I-45208A

## 10.4 COMPONENT BREAKOUT

### Discussion/Objectives:

Component breakout decisions should be made to determine whether or not subsystems, components, or parts should be acquired by the Government from a subcontractor or vendor and provided to the prime contractor or appropriate subcontractor as Government Furnished Equipment (GFE). The PMO should participate in any breakout decision efforts. The CAS, if requested, should assist the PMO in the breakout analyses and evaluations.

### Application:

The program's acquisition strategy should include the milestones at which component breakout decisions should be made. These decisions should be scheduled early in the contracting cycle so that GFE and Contractor Furnished Equipment (CFE) are identified for initial program efforts and continue through to the provisioning of spare parts.

Component breakouts should be limited to components that had previously been used in previous system acquisitions.

DoD policy is to breakout components if substantial net cost savings can be obtained without jeopardizing the performance, quality, reliability or timely delivery of the system being acquired. Also, consideration of component breakout should be made whenever substantial net cost savings will result from greater quantity purchases or improved logistics support.

In addition, component breakout efforts can establish sources for subsequent acquisition of spare and repair parts.

#### Activities:

The PMO, with the assistance of the CAS, as required, should make an assessment of potential risks in each component breakout decision. The evaluation should consider the possible impacts of such factors as late deliveries or reduced reliability. Calculations of estimated net cost savings over the program life cycle should be accomplished and also evaluations of technical, operational and logistic support aspects should be conducted.

Guidelines for component breakout decisions should include the following considerations:

- Is the design of the component and the end product sufficiently stable?
- Is a suitable data package available with unlimited rights for use in Government procurement?
- Does the component meet QA and reliability requirements of the end product's specifications?
- Are technical support resources available for the breakout component support?
- Will the breakout cause any logistic support problems?
- Can the breakout be accomplished without jeopardizing the delivery or integrity of the end product?
- Can advance procurement funds be made available to provide for an necessary additional lead time, if required?
- Is the component currently available in the Government's supply support system or as GFE in another end product?

- Are there any financial or other responsibilities being assumed by the prime contractor, that will have to be assumed by the Government if the component is made GFE?

- Will substantial net cost savings be achieved over the system's life cycle?

#### Impacts:

Recognizing the complexity of military systems, it is understandable that the component breakout decisions could have significant adverse impacts on an acquisition program if not made carefully. Such impacts could affect cost, schedule and technical aspects of the program.

#### References:

AFR 800-22  
AFSCR 800-31  
NAVAIR 4340.3A  
"DoD Manufacturing Management Handbook," Second Edition, DSMC. July 1984, pp. 7-21 thru 7-23

### 10.5 LEADTIME ANALYSIS

#### Discussion/Objectives:

Leadtime has been defined as the time period between the authorization to purchase an item to the time at which it is available for its intended use. The delays in acquiring subsystems, components or material needed in the acquisition of a system can cause schedule slippages and increased cost implications. Thousands of items have been identified by DoD and the Services that have considerable long lead times which could affect the acquisition of systems.

A discussion of the causes of increasing long lead time items is presented in a technical report entitled, "Study of Increasing Lead Times in Major Weapon Systems Acquisition," developed for the DSMC in July 1981.

The PMO should develop requirements for the prime contractor's leadtime analysis and management approach to the resolution of critical item acquisitions.

The leadtime analysis should be conducted as early in the acquisition process as possible so as to provide adequate time in which to acquire advance procurement funds, place the purchase orders and receive the critical items in sufficient time as to not impinge on the planned program schedule.

The acquisition strategy and the planned schedule for the program must include long lead time items considerations, particularly the longest leadtime for any given critical item.

#### Activities:

The PMO should develop requirements for the prime contractor's leadtime analysis and management approach.

Leadtimes should be evaluated systematically and schedule impacts determined for all identified critical items during Production Readiness Reviews (PRRs) and other program and manufacturing reviews, as required.

The CAS should evaluate the prime contractor's leadtime analysis and management approach against the contract requirements and advise the PMO of the results of the evaluation.

Data regarding leadtimes can be obtained from Service leadtime data bases such as the "Manufacturing Lead Times" Reports published by the Navy Shipbuilding Scheduling Office, Philadelphia Naval Shipyard, or Air Force System Command (AFSC) (Industrial Materials Division) access to the Air Force's central leadtime data base system. In addition, data can be obtained from numerous industrial sources and associations, with which comparisons can be made.

Determinants of leadtime vary with a number of economic conditions, such as:

- The number of industrial sources,
- The industrial source workload,
- The availability and costs of raw material,
- The overall industrial demand, both DoD and private sector,
- The technology state-of-the-art,
- The cost of money, and
- The escalation of money due to inflation, or de-escalation due to technology.

Prime contractors and subcontractors should continually monitor the leadtimes for required subsystems, components and material. In addition, in the case of critical items, regular contracts with suppliers should be made to ascertain any potential future changes in leadtimes.

#### Impacts:

Unplanned for long leadtime critical items can seriously jeopardize an otherwise well planned acquisition strategy and schedule. Such oversight can accordingly result in cost increases.

#### References:

- "DoD Manufacturing Management Handbook," Second Edition, DSMC. July 1984. pp. 5-25 thru 5-32.
- "Study of Increasing Lead Time in Major Weapon Systems Acquisition," Technical Report, DSMC. July 1981.
- "Manufacturing Lead Times," published quarterly by the Navy Shipbuilding Scheduling Office, Philadelphia Naval Shipyard

## 10.6 SOURCE AND RECEIVING INSPECTION AND TEST

#### Discussion/Objectives:

Quality Assurance (QA) controls and standards should be established by the prime contractor and higher tier subcontractors to ensure that all sub-contracted items are produced according to the program requirements. The CAS should ensure that QA controls and standards are established at either the source or receiving points for sub-contracted items.

#### Application:

The prime contractor's QA program should ensure that appropriate controls and standards are established at the prime contractor's facilities and at all the subcontractor tiers to cover all sub-contracted items.

#### Activities:

The prime contractor should incorporate appropriate controls and standards in the prime's QA program that cover source and receiving inspections and tests at all levels of the program technical effort.

All QA controls and standards should be flowed down all tiers of the contracted effort.

The CAS should ensure that the prime contractor's QA program is implemented and functioning adequately, particularly covering inspections and tests of all subcontracted items at either source or receiving points. QA efforts regarding subcontracted items should be periodically evaluated by the CAS, including documented results of inspections and tests. Serious deficiencies or defects should be identified, and courses of actions for their resolution developed and implemented, as appropriate, by the responsible contractor and monitored by the CAS. Periodically, the CAS should advise the PMO as to the status of the source and receiving inspection and test operations.

#### Impacts:

Source and receiving inspections and tests are valuable tools in a QA program to

ensure that completed items meet the program requirements. Inadequate inspections and tests can subsequently cause production and integration schedule delays with increased costs. Further, when the system is fielded, further impacts may occur such as the need for additional maintenance, increased system downtime, and safety impacts.

#### References:

FAR 46  
DFARS 46  
DoDD 4155.1  
AMC R 702-1D  
AMC R 702-6  
AMC P 702-13  
AFR 74-1  
AFSCR 74-1  
AFCMDR 74-1  
NAVMAT 4355.69A  
NAVMAT 4855.1A  
NAVMAT 4855.9  
MILSPEC-Q-9858A  
MILSPEC-I-45208A

### 10.7 VENDOR CHANGE CONTROL

#### Discussion/Objectives:

The prime contractor's Configuration Management (CM) plan should include procedures for handling proposed subcontractor engineering changes, from the data required to be included in the proposals to the reviews and approvals by the prime contractor and the Government. The PMO should review the prime contractor's CM plan to ensure that vendor change procedures are adequately delineated and that the prime contractor employs the procedures throughout the acquisition process.

#### Application:

Primary attention in the procedures for handling subcontractor engineering changes should be those that affect form, fit, or function (Class I changes). Secondly, attention should then be directed at all other changes (Class II).

#### Activities:

The prime contractor should incorporate specific procedures in its CM plan for handling and reviewing proposed subcontractor engineering changes. The change package prepared by the subcontractor should contain at a minimum:

- A statement of the problem and the proposed resolution.
- What alternatives were considered.
- An analysis of the problem, along with the conclusions that demonstrate that the proposed change will rectify the problem.
- An analysis that demonstrates that the proposed change will not generate new problems.
- A verification statement that interface compatibility, including test, operations, safety and reliability will not be impaired.
- An estimate of the cost and schedule impacts.
- A proposed specification or Interface Control Document (ICD) revision.

The PMO should review the prime contractor's CM plan and changes thereto, to ensure that it provides adequate procedures for the handling of proposed subcontractors engineering changes, including the preparation and content of the change package, the prime contractor's review procedures, revision procedures, and approval procedures.

Periodically, the PMO should request the CAS to evaluate the prime contractor's handling of subcontractor's change proposals.

#### Impacts:

Accurate vendor/subcontractor change control is essential to good configuration management. Inadequate control and

management of configuration items can result in adverse impacts on the quality assurance aspects of the program.

#### References:

DoD-STD-480A  
MIL-STD-481A  
MIL-STD-1456  
"System Engineering Management Guide,"  
Second Edition, DSMC. December 1986.  
pp. 11-5 thru 11-8.

### **10.8 DESIGN ENGINEERING MANAGEMENT**

#### Discussion/Objectives:

The PMO and CAS should review and evaluate the prime contractor's plans and management systems for effectively managing the technical efforts of subcontractors relative to design, integration, test, production engineering changes, resources, producibility, and reliability and maintainability.

#### Application:

Periodically review and evaluate the adequacy of the prime contractor's design engineering management efforts regarding the subcontractors technical efforts.

#### Activities:

The PMO and CAS should periodically conduct reviews and evaluations of the prime contractor's technical efforts and management systems that relate to the subcontractors technical efforts, such as design, integration, test, production engineering changes, resources, producibility, and reliability and maintenance.

The prime contractor should periodically conduct reviews and evaluations of the subcontractors management efforts regarding the technical aspects of the subsystems, and the components or material they are producing. Deficiencies should be identified and corrected as soon as possible so as to not impact on the end

product. Significant problems and their resolution should be summarized in reports to the CAS and the PMO.

#### References:

DoDD 4245.6  
DoDD 4245.7M  
DoDI 5000.38  
Army Field Manual 770-78  
AFSCP 84-4  
AFSCP 800-3  
NAVSO P-6071  
MIL-STD-490A  
MIL-STD-1521B  
"Systems Engineering Management Guide," Second Edition, DSMC. December 1986. Chaps. 11 thru 13.  
"DoD Manufacturing Management Handbook for Program Managers," Second Edition, DSMC July 1984. Chaps 11 thru 14.

### **10.9 VENDOR PERFORMANCE RATING SYSTEM**

#### Discussion/Objectives:

Prime contractors are responsible for determining the responsibility and reliability of their prospective subcontractors. The determinations of prospective subcontractors qualifications could influence the Government's decision to select a certain prime contractor for an acquisition program. Prime Contractors should use a formal vendor performance rating system for evaluating subcon-tractors.

#### Application:

There is a variety of vendor performance rating systems in use throughout private industry and the Government. The adequacy of a particular system should be evaluated by both the prime contractor and the CAS. The Government should use the same standards in the evaluation of the prime contractor and the subcontractors.

#### Activities:

The prime contractor should at least include the following considerations in the rating evaluation:

- Past performance in meeting schedules and quality commitments.
- The adequacy of the subcontractor's financial resources.
- The ability to acquire additional financial resources, if required to meet and accomplish timely subcontracted work efforts and performance.
- The capabilities to comply with the proposed or required performance and delivery schedule, considering the subcontractor's current and future available capacity and capabilities.
- A history of business integrity and reliability.
- Be otherwise eligible and qualified to perform the required technical effort.

The CAS should periodically review and evaluate the prime contractor's vendor performance rating system. The review should determine the following:

- The rating system used.
- The aspects of the subcontractor's performance that were evaluated.
- The techniques used to evaluate the subcontractor's performance.
- The identity of the group that conducted the evaluation.
- The adequacy and currency of the data used in the evaluation.
- The decision making process used in selecting a vendor or subcontractor.

#### Impacts:

Not adequately evaluating subcontractors' performance can result in the selection of subcontractors who could produce adverse

impacts to a program. Production slippages or even stoppages could occur if the subcontractor does not have adequate funding or financing capabilities, or does not have the capability or capacity to produce items according to the program schedule and program requirements.

#### References:

FAR 9.104-1  
DAR Sup 1-307.6

### 10.10 SOFTWARE MANAGEMENT SURVEILLANCE

#### Discussion/Objectives:

As weapon systems become more complex and sophisticated, software is becoming an increasingly essential and costly element of the systems. The development of the software has, in many cases, become a primary schedule and cost driver in the acquisition of a system. Since software development is usually accomplished at the subcontractor level, it is imperative that the prime contractor's management of the subcontractors' software development efforts be monitored by the PMO so as to ensure the adequacy and efficiency of the management effort and the software Quality Assurance (QA) program.

#### Application:

The PMO should continually monitor the prime contractor's performance and management of the subcontractors' software development efforts and the adequacy of the software QA program.

#### Activities:

The PMO should continually monitor the prime contractor's performance and management of the subcontractors' software development efforts. Specific areas for monitoring should include:

- Computer resource utilization.
- Software development manpower capabilities and employment.

- Software requirements definition and stability.
- Software development progress and tests.
- Cost and schedule deviations.
- Software development tools being employed.

Software development should be in accordance with DoD-STD-2167A and DoD-HDBK-287, and the software QA program should be in accordance with DoD-STD-2168.

#### Impacts:

Since the cost of developing software many times far exceeds the cost of developing the hardware, it is essential that the software development effort be managed in an efficient and effective manner.

#### References:

DoD-STD-2167A  
DoD-HDBK-287  
DoD-STD-2168  
AMC R 715-510  
AMC P 70-4  
AMC P 70-14  
AFSCP 800-14  
AFSCR 800-16  
AFSCP 800-18  
AFSCP 800-43  
NAVCOMPT 5230.1  
MIL-STD-1521  
MILSPEC-S-52779

### 10.11 GOVERNMENT PROPERTY

#### Discussion/Objectives:

The CAS should monitor the prime contractor's movement of Government property to subcontractors' facilities and request supporting property administration assistance, when required. The CAS should also ensure that the prime contractor's property control system

includes procedures to encourage subcontractor compliance with Government property requirements.

Application:

The prime contractor is directly responsible and accountable for all Government property in the possession of the prime contractor and in the possession or control of a subcontractor. The prime contractor should establish and maintain a system in accordance with FAR 45.502 that will control, protect, preserve and maintain all Government property in the prime contractor's and subcontractors' possession.

The prime contractor should provide annual reports to the CAS regarding the total acquisition cost of Government property for which the prime contractor is accountable under each contract, including Government property at subcontractor plants and alternate locations, in the following classifications according to FAR 45.505-14:

- Land and rights therein.
- Other real property, including utility distribution systems, buildings, structures, and improvements thereto.
- Plant equipment valued at \$5,000 or more.
- Plant equipment valued at less than \$5,000.

Activities:

The CAS should periodically monitor the prime contractor's property control system operation as it relates to the movement of Government property to subcontractors' facilities and in the possession of subcontractors.

The CAS should review the prime contractors' annual report and reconcile the data with Government records.

Impacts:

Without adequate Government monitoring of the Government property in the possession of the prime contractor, accountability of Government property can be lost, that can equate to the loss of Government funding.

References:

FAR 45.5  
AMC R 735-7  
AFSCR/AFLCR 800-31

**10.12 INTEGRATED LOGISTIC SUPPORT (ILS)**

Discussion/Objectives:

The prime contractor should selectively apply and monitor the subcontractors' application of the Logistic Support Analysis (LSA) to their technical efforts throughout the acquisition process, as part of the systems engineering and design efforts, to ensure compatibility with the supportability and other ILS objectives of the program. In this regard, the PMO should monitor the prime contractor's efforts to ensure that all supportability considerations have been taken into account regarding the effective and economical support of the system.

Application:

The Logistic Support Analysis (LSA) is an iterative, systematic, and comprehensive analysis that should be conducted in accordance with MIL-STD-1388-2A, through every phase of the system's acquisition. The level of detail of the analysis and the timing of the task performance should be tailored and responsive to the acquisition program's schedule and milestones.

Activities:

The PMO should ensure that the prime contractor provides the necessary guidance and monitoring of the LSA tasks being performed by all the subcontractors. Primary LSA tasks to be accomplished are

(see Figure 5-2 of DSMC ILS Guide for acquisition phase timing):

- Program planning and control (Task 100)
  - Early LSA strategy
  - LSA plan
  - Program and design reviews
- Mission and support system definition (Task 200)
  - System standardization
  - Comparative analysis
  - Technological opportunities
  - Supportability factors
- Preparation and evaluation of alternatives (Task 300)
  - Functional requirements identification
  - Support system alternatives
  - Evaluation of alternatives and trade-offs
- Determination of logistic support resource (Task 400) requirements
  - Task analysis
  - Early fielding analysis
  - Post production support
- Supportability assessment (Task 500)
  - Supportability assessment (Test, evaluation and verification)

DoDD 5000.40  
 AR 700-127  
 AR 702-3  
 AMC R 700-15  
 AMC P 700-4  
 AMC P 700-11  
 AMC P 700-21  
 AFR 800-8  
 AFSCR 800-10  
 AFSC/AFLCP 800-34  
 AFCMDR 800-8  
 OPNAV 5000.49  
 NAVMAT 4000.20B  
 NAVMAT 4105.3A  
 NAVAIR 4000.2C  
 NAVAIR 4000.12  
 NAVEXLEX 4000.6D  
 NAVEXLEX 4000.13  
 MIL-STD-1369A  
 MIL-STD-1388-2A  
 "Integrated Logistics Support Guide,"  
 DSMC, May 1986

#### Impacts:

The LSA is an analytical effort that should influence the development of the system design and define the support requirements and criteria for the system. If the LSA is not accomplished in a comprehensive and systematic manner throughout all the acquisition phases, critical reliability and support deficiencies could result.

#### References:

DoDD 5000.39

## CHAPTER 11.0

### CRITICAL TESTS & REVIEWS

#### 11.1 CONSENT REVIEWS OF SUBCONTRACTING

##### Discussion/Objectives:

Even though the Government has no contractual relationship with a subcontractor (no privity of contract). There is a requirement to render consent to the placement of the contract. This is called Consent to Subcontract.

##### Application:

As stated in FAR 44.102, consent to subcontract is required when the "... the subcontract work is complex, the dollar value is substantial, or the Government's interest is not adequately protected by competition and the type of contract or subcontract." Consent may be waived for a reviewed and approved contractor purchasing system. The situation which exists for fixed price and cost type contracts which require consent or permit a waiver of consent (FAR 44.201-1, 44.201-2) should be reviewed in each situation.

##### Activities:

The ACO (in the absence of withholding) is responsible for consent review. Normally the ACO will call upon PMO personnel for assistance in the review of technical and program peculiar activities which may affect the ACO's decision. Some of the major items which go into the ACO's decision are:

- Is the price reasonable?
- Was the subcontract consistent with the approved make-or-buy program?
- Is the selection technically justified?

- Has the contractor determined the responsibility of the proposed subcontractor?
- Has there been a proper flow down of required contract clauses?
- Is the subcontract type appropriate to the use?

##### Impact:

The ACO consent review is an excellent opportunity for PMO personnel to become more fully aware of the subcontract implication of the prime contractor proposal.

##### References:

FAR 44.2  
FAR 44.102

#### 11.2 CONTRACTOR PURCHASING SYSTEM REVIEW

##### Discussion/Objectives:

The contractor's purchasing system is the set of procedures and activities that expend the Government's fund in support of contracted activities. This system is so important and central to the proper expenditure of funds that a concept called the Contractor Purchasing System Review (CPSR) Program has been established.

##### Application:

A CPSR is required to be held for each contractor whose sales to the Government are expected to exceed \$10 million over the next 12 months using other than sealed bid procedures. In the event a contractor continues to meet the sales requirement, the review should be conducted on a yearly basis.

**Activities:**

The ACO either approves or withholds approval of the contractor purchasing system based upon the extensive criteria found in DAR Supplement No. 1. The team which conducts the review should be composed of a wide range of Purchasing Systems Analysts (PSAs) augmented by experts in quality assurance, legal, small business, PMO technical and business personnel, DCAA, and others. Major review areas specified in DAR Sup. 1 include:

- Organizational History,
- Purchasing Policies and Procedures,
- Management of Purchasing,
- Development of Purchasing Requirements,
- Selection of Sources,
- Pricing, and
- Subcontract Award and Administration.

**Impact:**

The ACO may withhold or withdraw approval of a purchasing system at any time there are major weaknesses or when the contractor is unable to provide information to render approval. This can have serious impacts on the ability of a contractor to justify future proposals or even in process purchasing actions.

**References:**

FAR 44.3  
DAR Sup 1

**11.3 COS<sub>1</sub>/SCHEDULE CONTROL SYSTEM CRITERIA (C/SCSC)****Discussion/Objectives:**

The C/SCSC when implemented by FAR Clause 52.234-7000 in solicitation and 52.234-7001 in contracts requires the

contractor, and subcontractor when contractually specified, to establish and maintain a management system which will comply with the criteria in the Joint Implementation Guide and DoDI 7000.2

**Application:**

C/SCSC is normally applied to selected contracts within major systems acquisition as defined in DoDD 5000.1 and DoDI 5000.2. Services may identify their own dollar thresholds for application and also may selectively apply C/SCSC to important contracts of value below the threshold. The Cost Performance Report (CPR) is the primary report contractually required when C/SCSC is invoked. The Cost Schedule Status Report (CSSR) may be used for reporting data on important contracts which do not warrant full C/SCSC reporting.

**Activities:**

CAOs are responsible for surveillance of the contractors management system and may be requested to assist in a supporting review capacity also. The PMO has the primary responsibility of reviewing the reports submitted by the prime contractor which will include major subcontractor reports. The prime contractor has the responsibility and should conduct reviews of subcontractor submitted data.

**Impact:**

The proper maintenance of the reporting system and comprehensive analysis of CPR and CSSR data will permit the PMO to be aware of the cost impact of the technical aspects of the contract.

**Reference:**

FAR 52.234-7000  
FAR 52.234-7001  
DoDI 7000.2  
DoDI 7000.10  
AFSCP 173-5  
AFSCP 173-6  
AMC P 715-5  
NAVMAT P-5240

NAVSO P-3637  
Joint Guide (AMC-P 715-10, NAVMAT  
P-5243, AFLCP/AFSC P173-6, DLAH  
8315.1, DCAAP 7641.46)

#### **11.4 COST MONITORING REVIEWS (CMRs)**

##### Discussion/Objectives:

Cost Monitoring Reviews (CMRs) are conducted to review the cost management aspects of a contractor's facility to ensure that the contractor performs in the most efficient manner possible when conducting Government contracts.

##### Application:

Reviews are to be conducted at all major contractors where: a CAO has been established; the Government business over the next fiscal year is expected to exceed \$50,000 on other than FFP and FPE contracts; and the Government's share of the indirect cost of such sales will exceed 50%.

##### Activities:

The CAO designates a Cost Monitoring Coordinator (CMC) who has the primary responsibility for organizing and conducting the cost review. Activities of the CMC include:

- Preparing the review plan,
- Coordinating the on-going cost monitoring effort of the CAO,
- Coordinating dissemination of cost monitoring data among DCAA, PMOs, and other responsible agencies,
- Assembling the review team,
- Conducting the cost review, and
- Reporting review results.

##### Impact:

The integrity and efficiency of the contractor cost system will contribute to the success of contract performance by controlling both direct and indirect cost.

##### References:

DFARS 42.70

#### **11.5 VENDOR FUNCTIONAL AND PHYSICAL CONFIGURATION AUDITS**

##### Discussion/Objectives:

Audits are used to ensure that the Configuration Item (CI) which is being designed and built conforms to the technical documentation which was used to develop the item. Two types of audits are performed as outlined in MIL-STD-1521B. The two types of audits are Physical Configuration Audit (PCA) and Functional Configuration Audits (FCA).

##### Application:

When configuration management and associated reviews and audits are contractually imposed on a subcontractor, the FCA and PCA play an important role in the development of a component or system. The FCA is used to verify that ACI has completed development and that it functions as required. The FAC is a prerequisite to the PCA which is used to establish the product baseline for production. Normally the PCA is conducted on an early production unit, but it may be done during Full Scale Development.

##### Activities:

The PMO and the CAO, if appropriate, should attend these reviews. FCA activities, conducted by the prime contractor should be reviewed by PMO/CAO personnel, including review of text data, software documentation, and the corrective action taken. PCA includes detailed drawing reviews, technical documentation and manuals reviews, and quality control records. The product baseline should be established by formal

approval of the Type C specifications and satisfactory completion of the PCA.

Impact:

Failure of the prime contractor to conduct required FCAs and PCAs can lead to CIs which are either not adequately developed and tested, or are not adequately baselined to permit efficient production.

References:

DoDD 4245.7  
MIL-STD-1551B  
"Systems Engineering Management Guide,"  
Second Edition, DSMC. December 1986.

**11.6 VENDOR PRELIMINARY AND CRITICAL DESIGN REVIEWS**

Discussion/Objectives:

Design reviews are a part of the development process which should be used to verify that a configuration item (CI) is being designed to meet the technical requirements. Two reviews which are discussed herein are the Preliminary Design Review (PDR) and the Critical Design Review (CDR).

Application:

When configuration management is imposed on a subcontractor or vendor normally the design reviews identified in MIL-STD-1521B are conducted. Two of the most critical reviews are the PDR and CDR. These two reviews occur at the start and end of the CI detailed design activity respectively. The PDR verifies that the design activities have been accomplished successfully and therefore the detailed design effort may begin. The CDR in turn verifies that the detailed design has been completed and that the CI is releasable to production. In large computer systems there is often a system level CDR which integrates all the lower level CIs. In the case of a vendor, it is usually easier to have fewer CDRs because of fewer CIs. When there is a major/critical subcontractor, however, the

CDR process can well be a long, incremental effort on the part of the PMO, prime contractor and CAS.

Activities:

Items which are normally reviewed at PDR include:

- Development Specification (Type B),
- Trade and Design Studies,
- Engineering studies (ILS, safety, RM&A),
- Breadboards and Prototypes,
- Top level software design, and
- Interface specifications should receive special emphasis.

CDR Items may include:

- Draft product specification (Type C),
- Engineering studies,
- System specification compliance,
- Detailed software design document, and
- Interface design documents.

Impact:

The PDR and CDR coupled with the functional and physical audits provide the forum for the prime contractor to be assured, and ultimately the Government, that the design activity is progressing satisfactorily. Incremental design reviews are very common and must be conducted and evaluated in the context of the total system.

References:

DoDD 4245.7  
MIL-STD-1521B  
"System Engineering Management Guide,"  
Second Edition, DSMC. December 1986.

## 11.7 MANUFACTURING MANAGEMENT AND PRODUCTION CAPABILITY REVIEWS

### Discussion/Objectives:

The assessment of the production capabilities of subcontractors is as critical as the evaluation of the capability of the prime. As the component being produced by the subcontractor becomes more critical to the program, the more extensive the review process should be.

### Application:

Reviews of manufacturing systems may be divided into two general classes. The first group is concerned with system-centered surveys and the second is product-centered. These surveys should be undertaken by the PMO and CAO organization in order to evaluate the following:

- Program adequacy,
- Source Selection,
- Schedule Assessment, and
- Risk Assessment.

### Activities:

When conducting a system-centered review the thrust is primarily concerned with how the subcontractors system is designed and executed to support production requirements. Some specific aspects of a system centered survey include:

- Business mix analysis,
- Company size,
- System description,
- Promulgation to employees,
- System functional review, and

- Evaluation of specific invoked system risk as provided by the Cost/Schedule Control System Criteria (C/SCSC) and MIL-STD-1528, Production Management.

### Impact:

The review of subcontractor and potential subcontractor manufacturing systems must be done to ensure an accurate assessment of the risk associated with any production being undertaken.

### References:

AFSCR 84-2  
AFSCP 84-4  
DoDD 4245.6  
MIL-STD-1528A  
"Manufacturing Management Handbook,"  
Second Edition, DSMC. July 1984.

## 11.8 SUBCONTRACTING MANUFACTURING REVIEWS AND ASSESSMENTS

### Discussion/Objectives:

Manufacturing reviews are conducted to verify that a contractor or subcontractor is prepared to manufacture and/or produce the required product.

### Application:

A product-centered survey rather than a system-centered survey should be used. Product-centered surveys are more likely to require the involvement of the PMO along with the CAO due to the product nature of a specific acquisition. Some of the product-centered surveys include:

- Production Readiness Reviews (PRRs),
- Producibility Reviews,
- Production Feasibility Reviews, and
- Production Capacity Reviews.

### Activities:

The activities for a product-centered survey will vary in accordance with the value, complexity, and risk of the item(s) being produced. Some indicators of readiness for production which have been developed by the Defense Product Engineering Services Office (DPESO), Office of the Secretary of Defense include:

Hardware

- Engineering change traffic,
- Reliability growth pattern,
- Yield rates for special manufacturing processes, and
- Yield rates for test operations.

Software

- Rate of error discovery, and
- Rate of change requirements.

Impact:

The Production Readiness Review (PRR) will uncover risk areas in the cost, schedule, and performance of production programs. The degree of risk associated with each of the above areas can only be determined by thorough review of the subcontractor by the prime contractor, and as reviewed by the PMO and CAO.

References:

DoDD 4245.6  
DoDM 4245.7  
AFSCR 84-2  
MIL-STD-1528A  
"Manufacturing Management Handbook,"  
Second Edition, DSMC. July 1984.

## **APPENDIX A**

### **ACRONYMS AND TERMS\***

**Footnote:**

\*Primarily based on "Glossary-Defense Acquisition Acronyms and Terms," 2nd Edition, edited by Wilbur D. Jones, Jr., DSMC, July 1987; and supplemented by references from various DoD, Air Force, Army and Navy publications.

## ACRONYMS

ACAT	Acquisition Category (Navy)
ACO	Administrative Contracting Officer
ADARS	Army Defense Acquisition Regulation Supplement
ADM	Acquisition Decision Memorandum (SecDef)
AFCMD	Air Force Contract Management Division
AFIT	Air Force Institute of Technology
AFLC	Air Force Logistics Command
AFPRO	Air Force Plant Representative Office
AFR	Air Force Regulation
AFSARC	Air Force Systems Acquisition Review Council
AFSC	Air Force Systems Command
ALMC	Army Logistics Management College
AMC	Army Materiel Command
AMSDL	Acquisition Management Systems Data List
APSO	Associate Program Support Officer
AR	Army Regulation
ARPRO	Army Plant Representative Office
ASARC	Army Systems Acquisition Review Council
ATP	Acceptance Test Procedures
CAO	Contract Administration Office
CAS	Contract Administration Services
CCDR	Contractor Cost Data Reporting
CCP	Contract Change Proposal
CDR	Critical Design Review
CDRL	Contract Data Requirements List
CFE	Contractor Furnished Equipment
CFSR	Contract Funds Status Report
CICA	Competition in Contracting Act (1984)
CPR	Cost Performance Report
CPSR	Contractor Purchasing System Review
C/SCSC	Cost/Schedule Control Systems Criteria
C/SSR	Cost/Schedule Status Report
CWBS	Contract Work Breakdown Structure
DAB	Defense Acquisition Board
DCAA	Defense Contract Audit Agency
DCAS	Defense Contract Administration Services
DCASMA	Defense Contract Administration Services Management Area
DCASPRO	Defense Contract Administration Service Plant Representative Office
DCASR	Defense Contract Administration Service Region
DCP	Decision Coordinating Paper
DET	Detachment
DFARS	DoD Supplement to the FAR
DIDS	Data Item Description System
DLA	Defense Logistics Agency
DLSIE	Defense Logistics Studies Information Exchange
DODD	Department of Defense Directive
DODI	Department of Defense Instruction

ECP	Engineering Change Proposal
FAR	Federal Acquisition Regulation
FCA	Functional Configuration Audit
FSD	Full Scale Development (Phase) (sometimes called Full Scale Engineering Development, FSED)
FSED	Full Scale Engineering Development (Phase)
GFE	Government Furnished Equipment
GFM	Government Furnished Material
GFP	Government Furnished Property
GIDEP	Government Industry Data Exchange Program
ICAP	Integrated Contractor Assessment Program
ILS	Integrated Logistics Support
ILSMP	ILS Management Plan
ILSP	ILS Plan
IMIP	Industrial Modernization Improvement Program
IOC	Initial Operational Capability
IOT	Interorganizational Transfer
IPR	In-Process Review
LCC	Life-Cycle Cost
LOE	Level of Effort
LSA	Logistic Support Analysis
MANTECH	Manufacturing Technology
MILSPEC	Military Specification
MILSTD	Military Standard
MNS	Mission Need Statement
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSARC	Marine Corps Systems Acquisition Review Council
MSC	Major Subordinate Command
NAVPRO	Naval Plant Representative Office
NDI	Non-Development Item
NPDM	Navy Program Decision Meeting
O&S	Operations and Support
P <sup>3</sup> I	Pre-Planned Product Improvement
PCA	Physical Configuration Audit
PCO	Procuring Contracting Officer
PDR	Preliminary Design Review
PEO	Program Executive Officer
PERT	Program Evaluation Review Technique
PM	Program Manager; Project Manager
FMO	Program Management Office
PMR	Program Manager Review
PRO	Plant Representative Office
PRR	Production Readiness Review
PSE	Peculiar Support Equipment

<b>QA</b>	Quality Assurance
<b>R&amp;D</b>	Research and Development
<b>RDT&amp;E</b>	Research, Development, Test and Evaluation
<b>RILSA</b>	Resident Integrated Logistics Support Activity
<b>RIW</b>	Reliability Improvement Warranty
<b>SADM</b>	System Acquisition Decision Memorandum (Army)
<b>SAE</b>	Service Acquisition Executive
<b>(S)SARC</b>	(Service) Systems Acquisition Review Council
<b>SCA</b>	Supporting Contract Administration
<b>SCN</b>	Specification Change Notice
<b>SDR</b>	Software Design Review
<b>SMR</b>	Source Maintainability Repairability
<b>SPO</b>	System Program Office (Air Force)
<b>SPSO</b>	Special Program Support Officer
<b>SRR</b>	Systems Requirements Review
<b>SUPSHIP</b>	Superintendent of Shipbuilding
<b>SYSCOM</b>	Systems Command
<b>TECHEVAL</b>	Technical Evaluation
<b>TECHMOD</b>	Technology Modernization
<b>TO</b>	Technical Order
<b>USA</b>	U.S. Army
<b>USAF</b>	U.S. Air Force
<b>USMC</b>	U.S. Marine Corps
<b>USN</b>	U.S. Navy
<b>WBS</b>	Work Breakdown Structure

## DEFINITION OF TERMS

### ACQUISITION RISK

*The chance that some element of an acquisition program produces an unintended result with an adverse effect on system effectiveness, suitability cost, or availability for deployment*

### ACQUISITION STRATEGY

*The conceptual framework for conducting systems acquisition, encompassing the broad concepts and objectives which direct and control the overall development, production, and deployment of a system. It evolves in parallel with the system's maturation. It must be stable enough to provide continuity but dynamic and flexible enough to accommodate change. It is tailored to fit the needs for developing, producing and fielding the system. Required by OMB Circular A-0109 and service directives for virtually all programs.*

### ACQUISITION STREAMLINING

*Any action that results in more efficient and effective use of resources to develop, produce, and deploy quality defense systems and products. This includes ensuring that only cost-effective requirements are included, at the most appropriate time, in system and equipment solicitations and contracts.*

### ADMINISTRATING CONTRACTING OFFICER

*The Government contracting officer, often at an installation other than the one which made the contract, who handles the business administration of the contract.*

### BASELINING

*A process whereby all managers concerned collectively agree on the specific description of the program, requirements, and funding, and make a commitment to manage the program along those guidelines.*

### CONFIGURATION MANAGEMENT

*A procedure for applying technical and administrative direction and surveillance to (a) identify and document the functional and physical characteristics of an item or system, (b) control any changes to such characteristics and (c) record and report the change, process, and implementation status. The configuration management process must be carefully tailored to the capacity, size, scope, and phase of the life cycle, nature and complexity of the system involved.*

### CONTRACT

*An agreement between two or more legally competent parties, in the proper form, on a legal subject matter or purpose, for a legal consideration.*

### CONTRACT ADMINISTRATION OFFICE

*The activity identified in the DoD Directory of Contract Administration Services Components assigned to perform contract administration responsibilities. It is a general term and includes ARPROs, AFPROs, NAVPROs, SUPSHIPS, and DCAS field offices.*

### CONTRACTING ACTIVITY

*Each Service designates certain commands as contracting activities. The subordinate command in which the Principal Contracting Office is located. It may include the program office, related functional support offices, and contracting offices. DoD FAR Supplement 2.1 lists the Contracting Activities. Examples are AFSC, ESD, ASD, AMC, MICOM, and Navy SYSCOMs. Synonymous with Procuring Activity.*

### CONTRACT REQUIREMENTS

*In addition to specified performance requirements, contract requirements include those defined in the Statement of Work (SOW); specifications, standards and*

*related documents; the Contract Data Requirements List (CDRL); management systems; and contract terms and conditions.*

#### **CONSTRAINTS**

*Restrictions or boundary conditions that impact overall capability, priority, and resources in system acquisition.*

#### **CRITICAL ITEM**

*A subsystem, component, material or other item that could seriously jeopardize the successful completion of program requirements if not available when required during the procurement/ production. Also an item that could have an adverse impact on cost, schedule, quality, and/or technical performance specifications.*

#### **CRITICAL SUBCONTRACT**

*A subcontract, the failure of which seriously jeopardizes the successful completion of a program within cost, schedule, quality, and/or technical performance specifications.*

#### **DEFENSE ACQUISITION BOARD (DAB)**

*The Defense Acquisition Board (DAB) is responsible for reviewing major acquisition programs at designated milestones and appraising the Secretary of Defense of the program status and readiness to proceed to the next phase in the acquisition process, as well as other issues determined to be necessary. The Under Secretary of Defense (Acquisition) USD(A) chairs the DAB.*

#### **DOD CAS COMPONENT**

*Organizations and activities of the DoD Contract Administration Services (CAS) such as: Defense CAS Region (DCASR) Headquarters; Defense CAS Management Area (DCASMA) Offices; Army Commands and Contracting Centers/Agencies; DCAS and Service Plant Representative Offices (DCASPRO, ARPRO, AFPRO, NAVPRO & SUPSHIPS); Air Force Contract Maintenance Center Detachments (AFCMC DETs); and Defense Fuel Region Offices.*

#### **EVALUATION CRITERIA**

*Standards by which achievement of required operational effectiveness/ suitability characteristics or resolution of technical or operational issues, may be judged. At Milestone II and beyond, evaluation criteria must include quantitative goals (the desired value) and thresholds (the value beyond which the characteristic is unsatisfactory.)*

#### **FAST TRACK PROGRAM**

*An acquisition program in which time constraints require the design, development, production, testing, and support acquisition processes to be compressed or overlapped.*

#### **INDUSTRIAL MODERNIZATION INCENTIVES PROGRAM**

*Provides Government incentives to contractors to motivate investment of their own funds in facility improvements which should result in reduced acquisition costs and improved productivity.*

#### **LONG-LEAD ITEMS/LONG-LEAD TIME MATERIALS**

*Components of a system or piece of equipment for which the times to design and fabricate are the longest, and, therefore, to which an early commitment of funds may be desirable in order to meet the earliest possible date of system completion. Might be ordered during Full Scale Development (FSD) to arrive for production start.*

#### **LOW RATE INITIAL PRODUCTION**

*A low rate of output at the end of Full Scale Development (FSD) or beginning of production. Reduces the Government's exposure to large retrofit problems and costs while still providing adequate numbers of hard tooled production items for final development and operational tests prior to full production decision. Part of acquisition strategy. Risk reduction method. Decision often made at Milestone IIIA or equivalent. Also called Pilot Production or Limited Production.*

**MAJOR/CRITICAL ITEM**

*Terminology used by Air Force for Critical Item. (See Critical Item.)*

**MAJOR/CRITICAL SUBCONTRACT**

*Terminology used by Air Force for Critical Subcontract. (See Critical Subcontract.)*

**MAJOR DEFENSE ACQUISITION PROGRAM**

*A DoD acquisition program that is not a highly sensitive classified program (as determined by the Secretary of Defense) and: (1) That is designated by the Secretary of Defense (SecDef) as a major defense acquisition program because of urgency of need, development risk, joint funding, significant Congressional interest, or other considerations, or (2) That is estimated by the SecDef to require an eventual total expenditure for Research, Development, Test and Evaluation (RDT&E) of more than \$200 million (based on Fiscal Year 1980 constant dollars) or an eventual total expenditure for procurement of more than \$1 billion (based on Fiscal Year 1980 constant dollars).*

**MAJOR SYSTEM**

*A designation by the Defense Acquisition Executive (DAE) based on: (1) Development risk, urgency of need, or other items of interest to DAE, (2) Joint acquisition of a system by DoD and representatives of another nation, or by two or more DoD components; (3) The estimated requirement for the system's RDT&E, procurement (production). A Mission Needs Statement (MNS) is required for all acquisitions for which estimated costs will exceed \$250M (FY 87\$) in RDT&E funds or \$1.5B (FY 87\$) in procurement funds or both.*

**MANUFACTURING TECHNOLOGY**

*Any action which has as its objective: (1) the timely establishment or improvement of the manufacturing processes, techniques, or equipment required to support current and projected programs; and (2) the assurance of the availability to produce, reduce lead time, ensure economic availability of end items, reduce costs, increase efficiency,*

*improve reliability, or to enhance safety and anti-pollution measures.*

**MEMORANDUM OF AGREEMENT**

*In contract administration, an agreement between a Program Manager and a Contract Administration Office, establishing the scope of responsibility of the CAO with respect to the overall contracting and subcontracting management surveillance functions and objectives, and/or other contract administration functions on a specific contract or program.*

**MEMORANDUM OF UNDERSTANDING (MOU)**

*A Memorandum of Understanding may express a mutual understanding of an issue without implying commitments by parties to the understanding.*

**NON-MAJOR SYSTEM**

*A full system that does not qualify as a major system, or performs a major function of a complete system that is either within a major or another non-major system.*

**OPERATIONAL REQUIREMENTS**

*User or user representative generated validated needs developed to address mission area deficiencies, evolving threats, emerging technologies or weapon system cost improvements. Operational requirements form the foundation for weapon system unique specifications and contract requirements.*

**PRIME/PRIME CONTRACTOR**

*(1) The principal (or only) contractor performing under contract; (2) could include not only the principal, who acts as integrator or lead, but other major contractors teaming or performing in concert with integrator.*

**PRIVITY OF CONTRACT**

*The legal relationship between two parties of the same contract. The Government has "privity of contract" with the prime contractor. The prime contractor has "privity of contract" with the subcontractor. Therefore, the Government's relationship with subcontractors is indirect in nature.*

*Government involvement with subcontractors is channeled through prime contractor directed activities; only the prime contractor is authorized to direct the subcontractor.*

**PROCURING CONTRACTING OFFICER**

*The Government agent designated by a warrant having the authority to obligate the Government. The Procuring Contracting Officer (PCO) negotiates and signs the actual contractual document. Administration of the contract after award may be delegated to an Administrating Contracting Officer.*

**PROGRAM EXECUTIVE OFFICER**

*A senior Service acquisition official with decision authority over one or more major and/or non-major acquisition programs who reports to and receives direction from a Service Acquisition Executive (SAE). The number of PEOs are determined by the needs of the Service.*

**PROGRAM INSTABILITY**

*The condition imposed on a program due to problems in requirements, technology, and funding.*

**SECOND SOURCE**

*Execution of acquisition strategy to establish two producers for a part or system.*

**SERVICE ACQUISITION EXECUTIVE**

*A senior Service acquisition official having cognizance over the acquisition programs in the Service. The Service Acquisition Executive (SAE) provides direction to Program Executive Officers (PEOs) or Program Managers (PMs) as appropriate. In addition, the SAE is also the senior procurement executive for the Service.*

**SUBCONTRACT**

*A contract entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract.*

**SUBCONTRACT MANAGEMENT**

*A function which is primarily concerned with Contractor purchasing system review, make or buy program analysis and moni-*

*toring, subcontract plan management, and consent to subcontract award activities.*

**SUBCONTRACTING MANAGEMENT**

*A concept which addresses subcontracting issues and the Government's role in ensuring successful prime contractor interaction with subcontractors in order to satisfy prime contract requirements.*

**SYSTEM ENGINEERING**

*The application of scientific and engineering efforts to (1) transform an operational need into a description of a system configuration which best satisfies the operational need according to the measures of effectiveness; (2) integrate related technical parameters and assure compatibility of all physical, functional and technical program interfaces in a manner which optimizes the total system definition and design; (3) integrate the efforts of all engineering disciplines and specialties into the total engineering effort.*

**APPENDIX B**  
**MEMORANDUM OF AGREEMENT (MOA)**  
**GENERIC EXAMPLE**

**MEMORANDUM OF AGREEMENT**  
**BETWEEN**  
**PROGRAM MANAGER FOR THE (PROGRAM/SYSTEM)**  
**(ADDRESS)**  
**AND**  
**(SERVICE) PLANT REPRESENTATIVE OFFICE (SERVICE)PRO**

**I. PURPOSE:**

The purpose of this agreement is to identify and define the tasks to be performed by the (Service) Plant Representative Office (Service)PRO, (Location for address), in support of the Program Manager (PM) for the (System) Program, hereinafter referred to as the Program Management Office (PMO). These responsibilities are either an addition or an expansion of the standard contract administration functions outlined in FAR/DFARS 42.3.

**II. SCOPE:**

This Memorandum of Agreement (MOA) includes all aspects of the (System) acquisition activities at the (Contractor name and address). The (System) is presently in an (Acquisition Phase) and DoD approval was given on (Date) for the program to enter the (Acquisition Phase).

**III. FUNCTIONS AND RESPONSIBILITIES:**

The (Service)PRO will perform contract administration services and contract management in support of the Program Management Office's overall (System) program management responsibilities. The (Service)PRO is responsible for contract administration, as defined in FAR/DFARS 42.3, and is further authorized to act in accordance with this MOA. Final program management responsibility and authority are retained by the Program Management Office.

**IV. TASKS:**

A. The (Service)PRO, working in concert with the Program Management Office, will:

1. Perform all contract administration functions and those additional functions listed in Annexes A through J:

<u>Annex</u>	<u>Functional Area</u>
A	Engineering
B	Contract Administration
C	Quality Assurance
D	Manufacturing Operations and Property Administration
E	Surveillance of C/SCSC and CPR Analysis
F	Program Team Management
G	Integrated Logistics Support
H	Subcontracting Management
I	Configuration and Data Management
J	Test and Evaluation

2. Actively support the mission and responsibilities of the Program Management Office (PMO) through mutual problem solving and data exchange.
3. The Program Management Office will fund travel costs for (Service)PRO personnel

- B. The Program Management Office will fund travel costs for (Service)PRO personnel in support to (System) related technical meetings and conferences with other Government agencies, contractors, test agencies, or scientific organizations when travel is specifically requested and is outside the scope of (Service)PRO responsibility (Comptroller coordinated).
- C. Tasks not defined, clarified, or withheld by annexes to this MOA will be performed in accordance with the requirements of FAR/DFARS 42.3. Should the scope of the contractor's efforts change, the tasks required by this MOA will be reevaluated and modified, if appropriate.

V. COMMUNICATIONS:

- A. The (Service)PRO will inform Program Management Office counterparts on matters of interest which impact program activities. For unusual problems or issues, immediate communication will be established. Resolution of conflicts will be through the usual channels to include the Program Manager (PM), the (Service) Plant Representative, and, if necessary, the contractor.
- B. The Program Management Office will inform the (Service)PRO of all new developments significant to the program. (Service)PRO counterparts will be immediately informed by Program Management Office elements of all new program changes, new issues on significant program elements, and will appraise (Service)PRO elements of tentative and firm conferences scheduled at the (Contractor) Plant, at critical subcontractor sites, and at the Program Management Office when CAS functions are on the agenda.
- C. The (Service)PRO and Program Management Office will identify the need for, or changes to, any policies or procedures to improve efficiency and effectiveness of the (Service)PRO's contract management responsibilities.
- D. U.S. Government/DoD visitors to the (Contractor) will comply with the provisions of FAR/DFARS 42.402, and provisions of Annex (Letter) of this MOA.
- E. Program Management Office visitors to the (Contractor) will keep their (Service)PRO counterparts advised of the purpose of the visit, issues discussed, observations, conclusions, and new direction to the contractor or Government personnel.
- F. The (Service)PRO will inform the PMO of visits to the (Service)PRO or contractor by VIPs when the visit pertains to the (System) Program.
- G. The (Service)PRO Program Team Manager will inform the Program Management Office of any changes in cognizant personnel supporting the (System) Program. The Program Management Office will, upon request, assist the (Service)PRO in identifying the need for additional personnel to support subsequent program phases.
- H. All contractual correspondence between the Program Management Office and the (Service)PRO will be between the Contract Office and the (Service)PRO Administrative Contracting Officer (ACO).

- I. Should there be a need to issue to the contractor any formal notice of delinquency, cure, or show cause, such notice will be fully coordinated between the Program Management Office and the (Service)PRO. The (Service)PRO will keep the Program Management Office advised about contractor management systems deficiencies identified that affect the (System) Program.
- J. All contractual correspondence between the Program Management Office and the contractor shall be forwarded to the contractor with a simultaneous copy to the (Service)PRO.
- K. The (Service)PRO will coordinate with the (System) Program Manager prior to release of any program cost data to offices not specifically authorized by the PM.
- L. The (Service)PRO will have access to the (System) Management Information System (MIS) to provide electronic mail capability, electronic distribution of (System) information, and electronic access to (System) program documents, such as the Statement of Work (SOW).

VI. TERMS OF MOA:

- A. This MOA is effective when approved by the Program Manager (PM) for (System) and the (Service)PRO Commander. It will be reviewed, as required, or at least annually for correctness. Any changes to the document will be with the mutual consent of all signatories.
- B. The (System) Program Manager (PM) and the (Service)PRO Commander or (Service)PRO (System) Program Team Manager are responsible for carrying out provisions of this MOA and making changes necessary to meet program requirements.

## ANNEX A

### ENGINEERING

1. **PURPOSE:** To describe the (Service)PRO Engineering and Program Support Division functions and responsibilities required to support the (System) Program.
2. **POLICY:** The (Service Engineering Organization) has the overall responsibility for (System) engineering. (Service)PRO engineers will support the Program Management Office as necessary.
3. **FUNCTIONS AND RESPONSIBILITIES:**
  - a. (Service)PRO engineering will perform the contract administration tasks described by FAR 42.302, (40) through (49), and provide engineering support to the Program Management Office in accordance with (Service Directive/Regulation). Production Engineering portions will be a (Service)PRO task. Monitoring and evaluating the contractor's policies, procedures, and performance in the engineering functional areas. In addition, (Service)PRO will participate in all (System) technical interchange meetings/conferences at the contractor facilities, where the (Service)PRO involvement is required; and in the absence of (Service) representation, act as the primary Government technical representative.
  - b. (Service)PRO will:
    - (1) Monitor the (Contractor) engineering management of subcontractors. Provide a monthly status report to the PMO summarizing status, significant issues and significant changes in (Contractor) plans or procedures in subcontractors engineering management.
    - (2) Review all Acceptance Test Procedures (ATPs) and provide comments to the PMO as they are developed and used during development and production. After formal acceptance of ATPs at PCA the (Service)PRO shall be responsible for all ATP changes, and deviations from the ATPs, for all articles manufactured in production.
    - (3) Provide and coordinate recommendations/comments to the PMO for proposed ECPs, waivers, and deviations generated by the (Contractor).
    - (4) Provide and coordinate recommendations/comments to the PMO on (System) potential problems surfaced through the Government Industry Data Exchange Program (GIDEP) system.
    - (5) Provide recommendations on changes to System Safety Program Plan (SSPP); assist in audit and implementation of the SSPP; coordinate on contractually required system safety items; participate in the System Safety Group; and monitor contractor compliance with (Service Directive/Regulation), applicable portions of MIL-STD-882.

## **ANNEX B**

### **CONTRACT ADMINISTRATION**

1. **PURPOSE:** To provide clarification/modification/exceptions/additions of (Service)PRO functions defined in DFARS/FAR 42.3.

2. **CLARIFICATIONS/MODIFICATIONS:**

- a. Reference FAR 42.302(7) - Suspended or disapproved costs may be made after coordination with the SPO.
- b. Reference FAR 42.302(10) - For those findings of fact and decisions under the Disputes Clause on matters where the ACO does not have authority to take definitive action, the ACO shall assist the PCO in preparing Findings of Fact.
- c. Reference FAR 42.302(12) - The request will be coordinated with the PCO for concurrence prior to payment approval if deemed unusual or controversial. All disapprovals will be discussed with the PCO prior to issuance.
- d. Reference FAR 42.302(21) - The ACO or designated representative on-site shall issue work requests for the tasks to be performed at the (Location).
- e. Reference FAR 42.302(22) - The spares required during ICS provisioning is a contractor function and are priced in the contract. Negotiation and execution of spares when an organic posture has been achieved is as prescribed in the (Service)PRO MOA.
- f. Reference FAR 42.302(48) - Any noted discrepancies with the use of restrictive markings should be reported immediately to the PCO.

3. **EXCEPTIONS:**

(Specify any exceptions to the clarifications/modifications cited above.)

## ANNEX C

### QUALITY ASSURANCE

1. **PURPOSE:** To establish and define the responsibilities of the (Service)PRO in providing quality assurance support for the Program Management Office (PMO) and/or (Service Quality Assurance Group).

2. **FUNCTIONS AND RESPONSIBILITIES:**

a. The (Service)PRO functions and responsibilities relative to (System) quality assurance are essentially those outlined in (Service Directive/Regulation), and FAR/DFARS 42.3.

b. Additionally, the following functions are specifically delegated:

- (1) Upon request, review and provide comments on formal correspondence between the contractor and Program Management Office which pertains to quality.
- (2) Maintain continuous surveillance of the prime contractor's quality program and their control of quality from their major subcontractors. Notify (PMO and/or Service QA Group) of any actual or potential deficiencies to minimize the impact to the contract/program.
- (3) Support and/or participate in major reviews/audits conducted in the PMO such as: Preliminary Design Reviews (PDRs), Critical Design Reviews (CDRs), Physical Configuration Audits (PCAs), and Functional Configuration Audits (FCAs), and Production Readiness Reviews (PRRs).
- (4) (Service)PRO will include quality assurance data in the monthly Status Report in accordance with (Service Directive/Regulation).
- (5) (Service)PRO will inspect Laboratory Qualification Test products and associated data and certify the acceptance of conformity of the test products to the specification requirements. (Service)PRO will certify in writing that the test set-up conforms to the requirements.
- (6) (Service)PRO will inspect the Support Equipment test program to ensure that it meets the requirements of the specifications. Noncritical areas do not have to be exact.

## ANNEX D

### MANUFACTURING OPERATIONS

1. **PURPOSE:** To establish and define the responsibilities of the (Service)PRO in support of the Program Management Office.

Productive informal communication between (Service)PRO and PMO manufacturing representatives is encouraged. Formal communication such as requests for technical support, data submittals, and significant information on program changes, shall be routed through the respective (System) program management element of the (Service)PRO or PMO to assure fully coordinated information flow.

2. **FUNCTIONS AND RESPONSIBILITIES:**

- a. The (Service)PRO responsibilities relative to (System) Manufacturing Operations are essentially those outlined in DFARS and FAR with emphasis on:
- (1) FAR/DFARS 42.2 and 4 Contract Administration.
  - (2) FAR/DFARS 42.11 Production Surveillance.
  - (3) FAR 52.245-18 Special Test Equipment.
  - (4) FAR 52.245-17 and DFARS 45.306 Special Tooling.
  - (5) FAR 52.245-2 Government Property (Fixed Price)
- b. Additionally, the following functions are specifically delegated:
- (1) (Service)PRO will provide monthly Manufacturing Operations assessments. Such assessments will highlight specific schedule status, problems, achievements, etc., on subjects deemed appropriate, or as requested by the PMO. Reports should include, but not necessarily be limited to, the following:
    - (a) Master schedule status on individual (System) or (unit).
    - (b) System fabrication/assembly status including analysis of specific problem areas and planning and/or implemented corrective action/recovery dates, and a 90-day look ahead.
    - (c) Manufacturing departmental performance/assessment.
    - (d) Evaluation of the Contractor's Manufacturing Management Systems in terms of either contractor performance to date, or (Service)PRO assessment as a result of periodic systems analysis.
  - (2) Advise the PMO by telephone of significant anticipated delays in manufacturing/test programs, followed by progressive written reporting.

- (3) Validate GFE schedules. The PMO will be responsible for GFE deliveries. (Service)PRO will provide additional surveillance and support as requested by the PMO or (Service Engineering Group).
- (4) Conduct and/or participate in prime and subcontractor PRRs, PFRRs, PMRs, and other reviews as necessary.
- (5) Provide evaluations, findings, and recommendations on Contractor's Manufacturing Plan. Monitor contractor execution of plan and report noncompliance/significant problems to the PMO and/or (Service Engineering Group).
- (6) Notify the PMO of potential or actual labor disputes. In the event of a strike, provide an assessment of schedule or other impact to the program.
- (7) Evaluate the potential impact of Engineering Change Proposals (ECPs) and Contract Change Proposals (CCPs) on manufacturing operations and provide any recommendations to the PMO.
- (8) Analyze and verify contractor's requests for any special tooling and/or Special Test Equipment.
- (9) Conduct Special Investigations/Analyses as required.
- (10) Provide technical analysis of contractor cost proposals and support ASD fact-finding and negotiations as requested by contracting officers (PCO/ACO).
- (11) Coordinate on CDRL item transmittals and follow-up with written comments to the PMO on those CDRL items that the Program Manager (PM) does not concur with.
- (12) If appropriate, monitor progress on the (System) contract requirements for MIL-STD 1567A, Work Measurement in accordance with the contractor's Work Measurement Plan and report non-compliance to the Work Measurement Plan to the PMO or (Service Engineering Group) as necessary.

c. The PMO will:

- (1) Ensure that the (Service)PRO ASD/AF/(Code) is advised of pertinent communications between the contractor and the Program Management Office on transportation matters.
- (2) Advise the (Service)PRO of planned program changes or difficulties that could impact or influence the responsibilities of the (Service)PRO.

**ANNEX E**

**SURVEILLANCE OF COST/SCHEDULE CONTROL SYSTEM CRITERIA (C/SCSC)**

**AND**

**COST PERFORMANCE REPORT (CPR) ANALYSIS**

1. **PURPOSE:** To establish the responsibilities of the Program Management Office (PMO) with respect to C/SCSC surveillance under all contracts issued by the Program Management Office. The agreement is based upon the policy and objectives of the Cost/Schedule Control Systems Criteria Joint Surveillance Guide, and the C/SCSC Joint Implementation Guide.

2. **SCOPE:** This agreement describes the responsibilities and working relationships between the (Service)PRO and the Program Management Office and the activities necessary to assure continuing effective contractor control, use and reporting of cost, schedule, and technical performance within the purview of C/SCSC requirements. This agreement is applicable to all (System) contracts performed at (Contractor name and address), which incorporate C/SCSC requirements.

3. **RESPONSIBILITIES:**

a. **The Program Management Office will:**

- (1) Provide overall management of the acquisition program, including support of the surveillance team to assure continued contractor compliance with the C/SCSC.
- (2) Ensure the (Service)PRO is kept fully informed of pertinent program events, to include appropriate communications between the program manager and the contractor.
- (3) Direct the contractor, through the PCO and ACO, after consultation with the appropriate C/SCSC focal point, to effect major changes to his management control system, if required to achieve continued compliance with C/SCSC.
- (4) Request any problem analysis required beyond the scope of this MOA. Such requests will be addressed to the (Service)PRO.
- (5) Provide required specialized technical support needed for effective accomplishment of the surveillance program as requested.

b. **The (Service)PRO will:**

- (1) Provide overall assurance that the contractor's management control system continues to meet the requirements of C/SCSC.
- (2) Develop and implement a surveillance plan which provides the details for accomplishing system surveillance and maintenance in conjunction with and consistent with this MOA.

- (3) Review the surveillance plan on a periodic basis to ensure that it continues to provide a framework for effective C/SCSC surveillance.
- (4) Provide specialized support or problem analysis as agreed to in this MOA.
- (5) Keep the program manager advised of the status of the contractor's management control systems and C/SCSC related activities through a monthly report of surveillance activities and results.
- (6) Maintain records and submit by this MOA.

4. **SURVEILLANCE PLAN FRAMEWORK:** Surveillance plan shall provide for the following:

- a. Monitor the contractor's corrective actions resulting from C/SCSC continuous surveillance.
- b. Receive, evaluate, reconcile, and process external contractor performance and financial reports, *e.g.*, Cost Performance Reports (CPRs), *etc.* Verify that data is submitted in accordance with the reporting requirements. A statement and comments relative to the timeliness, accuracy, and reflection of actual conditions as reported in the CPR should be submitted each month to the Program Office.
- c. Use external and internal reports in performing general CAS functions per FAR/DFARS 42.3, *e.g.*, progress payments, or ECPs.
- d. Assure continuity, consistency, quality, and usefulness of the system in operation. This includes the following:
  - (1) Assuring that the contractor's accepted management control system is, in fact, being used by the contractor to manage the program.
  - (2) Evaluating changes (government-imposed or contractor-generated) to the system to ensure continued compliance with the criteria.
  - (3) Ensuring that system discipline and integrity are maintained.
- e. Performing periodic system reviews, evaluations, and tests to ensure maintenance of system integrity. A complete review of the contractor's management control system will be performed each years.
- f. Informing the contractor and program manager of any uncorrected deficiencies which affect overall validity of the contractor's system.
- g. Performing periodic evaluations of estimates-at-completion.

5. **RECORDS MAINTENANCE:** The (Service)PRO will establish and maintain files for all pertinent data and correspondence regarding the C/SCSC program. The (Service)PRO will assure the file contains updated regulatory and guidance material pertaining to the program. The file will contain copies of all correspondence with the contractor and program manager, description of the system, accepted changes to the system, memoranda of meetings, monthly surveillance reports/activities, reconciliations of appropriate reports from the

Contract Data Requirements List (CDRL), and deficiency situations requiring corrective action

6. **SURVEILLANCE REVIEW MEETINGS BETWEEN PROGRAM MANAGEMENT OFFICE, (SERVICE) PRO, AND DCAA:** Surveillance review meetings will be conducted, as necessary and upon mutual agreement of all parties, in conjunction with scheduled Program Management Reviews at the (Contractor) facility.

## ANNEX F

### PROGRAM TEAM MANAGEMENT

1. **PURPOSE:** To define the relationship between the (Service)PRO, and the Program Management Office (PMO) for (System) program management.
  
2. **FUNCTIONS AND RESPONSIBILITIES:** The (Service)PRO Commander will assign a (System) Program Team Manager to coordinate (System) program activities between the (Service)PRO and the Program Management Office. The (Service)PRO (System) Program Team Manager will be responsible to the (Service)PRO Commander for the (System) Program. He/she will perform analyses of directed topics at the request of the Program Management Office, if expertise and resources are available for that particular task. He/she will provide the Program Management Office monthly written team assessments in each functional area.
  
3. **COORDINATION:**
  - a. The (Service)PRO (System) Program Manager is the (Service)PRO (System) focal point and is responsible to the (Service)PRO Commander in that capacity. The (Service)PRO Administrative Contracting Office (ACO) for (System) has the legal responsibility for contract administration of the (System) contract through the (System) Program PCO.
  
  - b. The (Service)PRO (System) Program Team Manager will furnish the monthly Program Assessment Report to the PMO. This report shall contain the (Service)PRO Program Manager's overall assessment of program progress and supporting rationale. The status report shall also contain written status report from each functional representative on the (Service)PRO Program Manager's team (e.g., engineering, contract administration, manufacturing, quality assurance, ILS, and C/SCSC surveillance.)
    - (1) The (Service)PRO Monthly Program Assessment Report will include the following:
      - (a) Back-up chart for each area rated less than satisfactory explaining the problem and expected get well date.
      - (b) Chart reflecting all subcontractor competition (actual vs. planned) for the (System) program (e.g., how many are competitive, sole source).
      - (c) Recommendations on potential problems surfaced through the Government Industry Exchange Program (GIDEP).
      - (d) Status of deficiency reports.
  
    - (2) Provide (designated Service Groups) with copies of audits, surveys and/or reports pertaining to (Contractor) and/or the (System) program that are generated or obtained by the (Service)PRO.

## ANNEX G

### INTEGRATED LOGISTIC SUPPORT (ILS)

1. **PURPOSE:** To define the (Service)PRO responsibilities supporting the (System) ILS program and the logistics assistance provided by the FMO's Logistics Manager.

2. **SCOPE:** The present (System) Program is in the (Acquisition Phase). As the scope of the contractor's ILS efforts expands in the (Next Acquisition Phase), the ILS tasks of the (Service)PRO and PMCs will be appropriately broadened.

3. **FUNCTIONS AND RESPONSIBILITIES:**

a. **The (Service)PRO will:**

- (1) Appoint an ILS focal point within the (Service)PRO organization.
- (2) Monitor the contractor's management of the Logistics and Engineering interface. Provide comments to the PMC's Logistics Manager if problems arise.
- (3) Participate in contractor reviews involving ILS.
- (4) Participate in (Service) ILS program reviews and meetings.
- (5) Provide assistance at Source Maintainability Repairability (SMR) coding and provisioning conferences, when requested.
- (6) When the following events are done at the (Contractor's Facilities), assist in acquisition of Support Equipment (SE) by:
  - (a) Attending design reviews for SE and attending selected in-house contractor design reviews to ensure the contractor is considering all (Service) design requirements.
  - (b) Witnessing testing (Functional Configuration Audit) (FCA) of:
    - Non-complex Peculiar Support Equipment (PSE) first article testing.
    - Attend first unit testing of complex PSE.
  - (c) Reviewing and signing all test reports for acceptance of non-complex PSE.
  - (d) Performing the following functions during FCA/PCAs for complex Support Equipment (SE) when requested:
    - Witness the Fit and Function of the SE item.
    - Ensure that the Fit and Function testing shows the use of the SE by a technical manual or technical data sheet.
    - Provide general comments/suggestions on SE.

- (e) Assisting PMO and/or (Service Engineering/ILS Group) in conducting PCAs on complex PSE.
- (f) Signing off on all production acceptance test reports for complex PSE.
- (g) Providing reports to the PMO and/or (Service Engineering/ILS Group) on the support equipment required by (Contractor) to support the production line.
- (h) Witnessing all tests of PSE as requested.
- (i) Provide assistance in tracking MILSTRIP actions by Contractor as required.
- (j) Participating in Contractor Evaluations, Preliminary Design Reviews (PDRs), Technical Reviews, Critical Design Reviews, *etc.* on an as-requested basis.

b. The PMO's Logistics Manager will:

- (1) Inform the contractor as to the relationship between the PMO's Logistics Manager and the (Service)PRO.
- (2) Provide orientation to the (Service)PRO ILS focal point at the Program Management Office (PMO) as necessary.
- (3) Take the lead in establishing working relationships among the (Service)PRO, the PMO's Logistics Manager, and the (Service Engineering/ILS Group).

**ANNEX H**  
**SUBCONTRACTING MANAGEMENT**

1. **PURPOSE:** This annex establishes the subcontracting responsibilities for the (System) Program that are in addition to the standard subcontract management functions listed in FAR/DFARS 42.3.

2. **RESPONSIBILITIES:**

The (Service)PRO will:

- (a) Monitor (Contractor) management of critical subcontracts with respect to cost, schedule, and technical requirements. Special attention will be given to the flowdown of prime contract requirements and to visibility of subcontractor performance.
- (b) Review and verify the accuracy of the contractor's CDRL reports that provide status of critical subcontractor's activities/progress. Coordinate all deficiencies with the contractor and report significant deficiencies to the Program Management Office (PMO) via the ACO.
- (c) Attend selected critical subcontractor program reviews to assess the contractor's management of subcontractor problems.
- (d) Notify the Program Management Office via the ACO of any significant problems identified in "Consent-to-Issue" or "Advance Notification" reviews of subcontracts.
- (e) Delegate support administration to the Contract Administration Offices (CAOs) at selected major subcontractors' facilities to include reporting of status of subcontractor progress. The status reports should address schedule status, manufacturing progress, test status, and other inputs at the discretion of the respective CAOs. The PMO will identify the subcontractors to be reported as they become identified.

## ANNEX I

### CONFIGURATION AND DATA MANAGEMENT

1. **PURPOSE:** This annex defines the (Service)PRO Configuration and Data Management functions and responsibilities with regard to specifications, change management, audits, and status accounting in support of the (System) Program.
2. **FUNCTIONS AND RESPONSIBILITIES:** The (Service)PRO will support the PMO in the following functions:
  - a. Maintain surveillance of all contractor baseline documentation and provide comments to the PMO when necessary.
  - b. Monitor contractual change control through Engineering Change Proposals (ECPs) and Contract Change Proposals (CCPs).
    - (1) Monitor the timely preparation of proposals resulting from change orders.
    - (2) Track the disposition of all minor deviations/waivers.
    - (3) Verify the accuracy of all Specification Change Notices (SCN) prior to ACO signature for final approved CDRL distribution.
  - c. Provide recommendations/comments to the PMO for proposed Class I ECPs, CCPs, deviations, and waivers.
    - (1) Ensure all functional areas of the change proposal (engineering, logistics, manufacturing, *etc.*) are reviewed and appropriate comments are forwarded to the PMO.
    - (2) Ensure comments arrive at the PMO early enough to be considered in the change proposal evaluation process.
  - d. Concur/nonconcur in the Contractor's classification of all proposed Class II ECPs. Provide the PMO with the rationale for nonconcurrences.
  - e. Participate and assist the PMO in the conduct of Configuration Audits (FCA/PCAs) and Reviews (PDR/CDRs).
    - (1) Perform configuration management duties (including chairmanship) when delegated by the PMO and agreed to by (Service)PRO.
    - (2) Participate in all PMO chair audits/reviews.
    - (3) Track the overall status of the qualification test program for the purpose of supporting configuration audits.
    - (4) As is commensurate with available manpower, witness a representative sample of acceptance tests using PMO approved testing procedures.
    - (5) Support the incremental audits.

- (6) Monitor status of audit actions to verify their completion prior to acceptance of completed end items.
- f. Monitor the contractor's internal status accounting system.
- g. (Service)PRO/Program Management Office functions with regard to contract data are:
- (1) The (Service)PRO will monitor data distribution as required by the Contract Data Requirement List (CDRL).
  - (2) The Program Management Office will:
    - (a) Approve data submittals in accordance with the CDRL.
    - (b) Administer corrective action for problem areas and delinquency of data.
- h. (Service)PRO will support the PMO in the following functions:
- (1) (Service)PRO will support Engineering Data In-Process Reviews. Ensure that corrected procedures are included on checklists, drawing manual supplements, engineering orders and other directives, and in flow-down to subcontractors/vendors as applicable.
  - (2) Establish procedures to evaluate the engineering data with restrictive markings in order to ensure the validation of such markings. (Service)PRO will verify that limited rights data displays appropriate markings and certification.
  - (3) Monitor shipment of completed drawing packages and revisions to the (Service designated depository) and other aspects of the quality program in compliance with MIL-Q-9858A. (Service)PRO should assure contractor documents manufacturing instructions on the engineering drawings and that there are no discrepancies between the engineering drawings and the manufacturing instructions.
  - (4) Ensure that the contractor manages subcontractor/vendor engineering data and monitor the contractor's quality control procedures for verification that vendor/subcontractor data complies with DoD-D-1000 and DoD-STD-100.

## ANNEX J

### TEST AND EVALUATION

1. **PURPOSE:** To establish and define the responsibilities of the (Service)PRO functions and responsibilities required to support the Program Management Office (PMO).
2. **POLICY:** The (Service Engineering Group) has the overall responsibility for (System) Test.
3. **FUNCTIONS AND RESPONSIBILITIES:**
  - a. **The (Service)PRO will:**
    - (1) Provide Government witnessing of laboratory, qualification, and/or ground test accomplished at (Contractor Name and Address) area as approved by the PMO. Witness (when designated by the Program Office) and certify that Laboratory Qualifications Tests are run in accordance with the TIS by signing the test log.
    - (2) Arrange for Government witnessing by other Government Plant Representative Offices (Other (Service) PROs) for tests accomplished outside of the (Contractor facility) area.
  - b. **The PMO will:**
    - (1) Determine the witnessing requirements for all tests to be accomplished by (Contractor) or their vendors.
    - (2) Provide Government witnessing for selected laboratory, qualification and/or ground tests accomplished by (Contractor) or their vendors.

**APPENDIX C**  
**SUBCONTRACT FLOW DOWN CLAUSES**  
**FEDERAL ACQUISITION REGULATION (FAR)**

Appendix C was developed by Mr Robert V. Lieg of the ORI Group, and provided FAR citations through Federal Acquisition Circular (FAC) number 84-19. Mr. Lieg's document has been updated to reflect FAR citations through FAC number 84-32 of 11 January 1988.

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Gratuities (APR 1984)	52.203-3	No	Yes	You'll want to have the right to terminate the sub-contract and recover damages should the sub be guilty of offering or providing gratuities.
Covenant against Contingent Fees (APR 1984)	52.203-5	No	Yes	Protect yourself in the event your sub improperly solicited the contract on your behalf - the penalty is annulment and complete forfeiture - pass this clause along to your sub.
Restrictions on Subcontract or Sale to the Government (JUL 1985)	52.203-6	Yes		Must be included in all subcontracts.
Security Requirements (APR 1984)	52.204-2	Yes		Include in all subcontracts involving access to information classified "Confidential", "Secret", or "Top Secret".
Required Sources for Jewel Bearings and Related Items (APR 1984)	52.208-1	Yes		If this clause is in your prime contract, it must flow down to your sub--unless you have positive knowledge that the part being purchased does not contain jewel bearings or related items.
New Material (APR 1984)	52.210-5	No	Yes	Protect yourself. If the prime contains this clause, flow it down to your subs.
Defense Priority Allocation Requirements (MAY 1986)	52.212-8	No	Yes	Sub should be obligated to place its orders on the same priority system as the prime.

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through FAC 84 33  
FAC Date 8 February 1983

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Stop Work Order (APR 1984) and Stop Work Order - Facilities (APR 1984)	52.212-13  52.212-14	No	Yes	If this clause is in the prime, it is advisable to include it in the sub. If the subcontractor and its subs continue to work during the stop work period -- such costs may not be recoverable and the sub would have a right to continue performance and recover its costs -- thus putting you in a squeeze.
Audit-Sealed Bidding (APR 1985)	52.214-26	Yes		If this clause is in your prime, it must be included in all subcontracts over \$10,000.
Price Reduction for Defective Cost or Pricing Data - Modifications - Sealed Bidding (APR 1985)	52.214-27	No	Yes	The Government does not insist that this clause flow down to the sub. However, since the Government has the right to audit your subcontractor's records to determine if the subcontract price was defective, the Government will come against the prime to recover the excess amount. Therefore, you should draft a clause which will obligate your sub to reimburse you in the event your prime contract price is reduced in whole or in part due to subcontractor defective pricing. Do not use the FAR clause verbatim -- it must be tailored to the prime-sub relationship. In each case, the clause should be prepared in coordination with divisional or corporate legal.

**SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGISTRATION (FAR)**

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Subcontractor Cost or Pricing Data-Modifications-Sealed Bidding (APR 1985)	52.214-28	Yes		If the prime contains this clause, then it is applicable to subcontracts over \$100,000.
Examination of Records by Comptroller General (APR 1984)	52.215-1	Yes		If the prime contains this clause, then it must be included in all first-tier subcontracts.
Audit-Negotiation (APR 1984)	52.215-2	Yes		If this clause is in your prime, it must be included in all subcontracts over \$10,000. Explain to the sub that the clause is self deleting if the sub is not cost reimbursable or he/she is not otherwise subject to truth in negotiation.
Price Reduction for Defective Cost or Pricing Data (APR 1983)	52.215-22	No	Yes	The Government does not insist that this clause flow down to the sub. However, since the Government has the right to audit your subcontractor's records to determine if the subcontract price was defective, the Government will come against the prime to recover the excess amount. Therefore, you should draft a clause which will obligate your sub to reimburse you in the event your prime contract price is reduced in whole or in part due to subcontractor defective pricing. Do not use the FAR clause verbatim -- it must be tailored to the prime-sub relationship. In each case the clause should be prepared in coordination with divisional or corporate legal.

**SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)**

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Price Reduction for Defective Cost on Pricing Data-Modifications (APR 1985)	52.215-23	No	Yes	Same as 52.215-27 above.
Subcontractor Cost and Pricing Data (APR 1985)	52.215-24	Yes		If your prime contains this clause, then you must include its substance in all subcontracts expected to exceed \$100,000.
Subcontractor Cost and Pricing Data-Modifications (APR 1985)	52.215-25	Yes		If your prime contains this clause then you must include it in each subcontract that exceeds \$100,000 when entered into.
Integrity of Unit Prices (APR 1987)	52.215-26	Yes		Substance of this clause, except for para (b), must be included in all subcontracts.
Price Redetermination - Prospective (APR 1984)	52.216-5	Yes		If your prime contains this clause, you must include in each price redetermination or incentive price revision subcontract the substance of portions of this clause relating to quarterly submissions of cost data.
Price Redetermination - Retroactive (APR 84)	52.216-6	Yes		Same as 52.215-5 above.

**SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)**

Revision Through FAC 84.33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Allowable Cost and Payment (APR 1984)	52.216-7	No	Yes	If your prime is cost-reimbursement and you issue cost-reimbursement subcontracts, put your subs under the same constraints you're under for progress payments. Flow down the substance of this clause.
Incentive Price Revision - Firm Target (APR 1984)	52.216-16	Yes		Same as 52.216-5 above.
Incentive Price Revision - Successive Targets (APR 1984)	52.216-17	Yes		Same as 52.216-5 above.
Utilization of Small Business Concerns and Small Disadvantaged Business Concerns (JUN 1985)	52.219-8	No	Yes	Best to flow down this clause in all subcontracts.
Small Business and Small Disadvantaged Business Subcontracting Plan (APR 1984)	52.219-9	Yes		If your prime is over \$500,000 it will contain this clause and required in subcontracts over \$500,000.

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Utilization of Labor Surplus Area Concerns (APR 1984)	52.220-3		Yes	Desireable to include this clause in all sub-contracts in furtherance of government policy.
and Labor Surplus and Area Subcontracting Program (APR 1984)	52.220-4	Yes		Substance of this clause must be included in all subcontracts in excess of \$500,000.
Notice to the Government of Labor Disputes (APR 1984)	52.222-1	Yes		If this clause is in your prime contract, it must flow down to subs.
Contract Work Hours and Safety Standards Act-Over-time Compensation (APR 1986)	52.222-4	Yes		If your prime contract requires or involves the employment of laborers, mechanics, helpers, apprentices, trainees, watchmen guards, firefighters or fireguards, it will contain this clause which must be flowed down to all subcontractors.
Malsh-Healey Public Contracts Act (APR 1984)	52.222-20	No	Yes	It's not mandatory, but the very basic principles of the Act are such that it is in your best interest to flow it down.
Equal Opportunity (APR 1984)	52.222-26	Yes		Clause must be included in all subcontracts and purchase orders.

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Affirmative Action for Special Disabled and Vietnam Era Veterans (APR 1984)	52.222-35	Yes		Include in all subcontract and purchase orders of \$10,000 or more.
Affirmative Action for Handicapped Workers (APR 1984)	52.222-36	Yes		Must be flowed down to all subcontracts and purchase orders in excess of \$2,500.
Clean Air and Water Certification (APR 1984)	52.223-1	Yes		These clauses must be flowed down, and certifications must be obtained from suos.
Clean Air and Water and Clean Air and Water (APR 1984)	52.223-7			
Hazardous Material Identification and Material Safety Data (AUG 1987)	52.223-3	Yes		If your prime contains this clause you must flow it down to all tiers of subcontracts and purchase orders.
Privacy Act (APR 1984)	52.224-2	Yes		It would be a rare contractual situation, but if your prime contract calls for the design, development or operation of a system of records on individuals on behalf of a government agency to accomplish an agency function, your prime will contain this clause. It must be flowed down to all subs.

**SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)**

Revision Through FAC 84.33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Buy American Act - Supplies (APR 1984)  and Balance of Payments Program (APR 1984)	52.225-3  52.225-7	No		In order to support its own certification, the prime will want to require its subcontractors to identify any foreign content in the subcontracted items.
Duty-Free Entry (APR 1984)	52.225-10	Yes		Flow down to subs is required only if, under the subcontract, there will be imported into the customs territory of the U.S.: 1) supplies identified in the schedule as supplies to be accorded duty free entry; or 2) other foreign supplies in excess of \$10,000.
Certain Communist Areas (APR 1984)	52.225-11	Yes		If your prime contains this clause, it must be flowed down to all subs at all tiers.
Authorization and Consent (APR 1984)	52.227-1	Yes		This clause must be flowed down to all subcontracts at any tier for supplies and services expected to exceed \$25,000.
Notice and Assistance Regarding Patent and Copy- right Infringement (APR 1984)	52.227-2	Yes		Must be flowed down to all subcontracts at any tier for supplies and services expected to exceed \$10,000 for civil agencies subject to Title 41 U.S.C. 252(c)(3) and \$25,000 for defense agencies subject to Title 10 U.S.C. 2306(a)(3).

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through: FAC 84 33  
FAC Date: 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Patent Indemnity (APR 1984)	52.227-3	No	Yes	If you are required to indemnify the government, your subs should indemnify you - protect yourself, flow it down.
Reporting of Royalties (Foreign) (APR 1984)	52.227-8	Yes		A provision similar to this clause must be flowed down to any subcontract at any tier that involves an amount in excess of the equivalent of \$50,000 United States dollars.
Refund of Royalties (APR 1984)	52.227-9	Yes		The substance of this clause must be included in any subcontract at any tier in which the amount of royalties reported during negotiation of the subcontract exceeds \$250.
Filing of Patent Applications - Classified Subject Matter (APR 1984)	52.227-10	Yes		Must be flowed down to all subcontracts at any tier that cover or are likely to cover classified subject matter.
Patent Rights - Retention by the Contractor (Short Form) (APR 1984)	52.227-11	Yes		Must be flowed down to all subcontract at any tier for experimental, developmental or research work. (Read paragraph (g) of these clauses in depth as to right and relationship of the prime, sub and Government.)
(Long Form) (APR 1984)	52.227-12	Yes		

**SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)**

Revision Through FAC 84-33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Patent Rights - Acquisition by the Government (APR 1984)	52.227-13	Yes		Must be flowed down to all subcontracts at any tier for experimental, developmental or research work.
Worker's Compensation Insurance (Defense Base Act) (APR 1984)	52.228-3	Yes		If your prime contains this clause, it must be flowed down to all subs at all tiers.
Insurance - Work on a Government Installation (APR 1984)	52.228-5	Yes		If it's in your prime it must be flowed down -- and it also requires your subcontractors to provide and maintain insurance if their presence on a government installation is involved.
North Carolina State and Local Sales and Use Tax (APR 1984)	52.229-2	Yes - Construction Only		If your prime contains this clause you must obtain certified statements from your subs similar to the ones you must provide under this clause.
Cost Accounting Standards (SEP 1987) and Administration of Cost Accounting Standards (SEP 1987)	52.230-3  52.230-4	Yes		If this clause is in the prime contract it must be included in all negotiated subcontracts in excess of \$100,000 unless sub's price is based on established catalog or market prices or prices set by law or regulation -- however, disputes provision must be excluded from flow down. Subcontractor must also flow down these clauses to lower tier subs over \$100,000.

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Progress Payments (AUG 1987)	52.232-16	Yes - For Small Businesses Only	Yes - For All Large Business Subcontracts	To qualify for flow downs, the subcontract or inter-divisional order must involve a minimum of 4 months (for small businesses) and 6 months (for large subs) between beginning of work and first delivery.
Protest After Award (JUN 1985)	52.233-3	No	Yes	Protect yourself. If you get stop work order, your subcontractors should stop work on their subcontracts.
Changes - Fixed Price (AUG 1987)	52.243-1	No	Yes	Unless you flow it down, you will be in default if the Government orders a change <u>but</u> your sub won't comply.
and Changes - Cost - Reimbursement (AUG 1987)	52.243-2			
and Changes - Time - and - Materials or Labor - Hours (AUG 1987)	52.243-3			
and				

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through FAC 84-33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Changes (AUG 1987) and Changes and Changed Conditions (APR 1984)	52.243-4  52.243-5			
Subcontracts (Cost-Reim- bursement and Letter Contracts) (JUL 1985)	52.244-2	Yes - A require- ment to flow down other FAR clauses		This clause requires the prime to flow down to cost- reimbursement subcontractors certain portions of FAR clauses 52.216-5, 52.216-6, 52.216-16 or 52.216-17. Additionally, prime must agree to provide progress payments to fixed-price small business subs pursuant to 32.502-1 and 32.504(f).
Government Property (Fixed Price Contracts) (APR 1984)	52.245-2	No	Yes	If you intend to transfer Government property to a subcontractor, this clause should be included in the subcontract -- except that risk of loss must be assumed by the sub in accordance with the basic subparagraph (g). With the Contracting Officer's permission, risk of loss of GFE in the subs possession can be assumed by the Government in accordance with alternate subparagraph (g).
Government Property (Cost-Reimbursement, Time-and-Material or Labor-Hour Contracts) (JAN 1986)	52.245-5	No	Yes	If you intend to transfer Government property to a subcontractor, this clause should be included in the subcontract. With the Contracting Officer's permission, risk of loss can be assumed by the Government.

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Special Tooling (APR 1984)	52.245-17	Yes		If this clause is in your prime contract, and during fact finding of the subs proposal it is determined that the subs price includes the full cost of special tooling, then the subcontract must contain this clause -- or a clause which gives the Government comparable rights to those contained in the standard clause -- unless you and the Government agree that such rights are not of substantial interest to the Government.
Special Test Equipment (APR 1984)	52.245-18	Yes		If this clause is in your prime contract and the subcontract contains provisions permitting the sub to acquire or fabricate special test equipment for the Government's account, then this clause must be included -- highlight the fact that the sub cannot buy or make any item of special test equipment without first obtaining the prime's consent -- the prime in turn must first obtain the Government's consent.
Inspection of Supplies - Fixed Price (JUL 1985) and Inspection of Supplies - Cost-Reimbursement (APR 1984) and	52.246-2  52.246-3	No	Yes	Government has the right to inspect or test on your subcontractor's premises. Thus, you best flow that portion of the clause to the sub relating to such rights and conditions thereto.

**SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)**

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Inspection-Time-and- Material and Labor - Hour (JAN 1986)	52.246-6			
Limitation of Liability (APR 1984)	52.246-23	Yes		If your prime contains this clause you must flow it down to all subcontracts.
Limitation of Liability - High-Value Items (APR 1984)	52.246-24	Yes		If your prime is over \$25,000, you must flow this clause down after obtaining Contracting Officer's advance written approval.
Limitation of Liability - Services (APR 1984)	52.246-25	Yes		This clause must be flowed down to each subcontract over \$25,000.
Preference for U.S. - Flag Air Carriers (APR 1984)	52.247-63	No	Yes	Section 5 of the International Air Transportation Fair Competitive Practice Act of 1974 (49 U.S.C. 1517) (Fly America Act) requires all Federal Agencies and Government Contractors and Subcontractors use U.S. Flag Carriers for Government financial air transportation. Protect yourself - flow this clause down if it's in your prime.
Value Engineering (APR 1984)	52.248-1	Yes		You must flow this down in all subcontracts of \$100,000 or more. Its optional for subcontracts of lesser value.

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Termination for the Convenience of the Government (Fixed Price) (Short Form) (APR 1984)	52.249-1	No	Yes	Unless you flow the appropriate clause down, you will be caught in the middle if the Government terminates and your sub refuses to accept termination instructions and sues for breach of contract.
(Fixed Price)(APR 1984)	52.249-2			
(Dismantling, Demolition or Removal) of Improvements) (APR 1984)	52.249-3			
(Services) (Short Form) (APR 1984)	52.249-4			
(Educational) and Other Non-Profit Institutions) (APR 1984)	52.249-5			
(Cost-Reimbursement) (MAY 1986)	52.249-6			
(Fixed-Price, Architect-Engineer) (APR 1984)	52.249-7			
and Termination of Work (Consolidated Facilities or Facilities Acquisition) (APR 1984) and	52.249-11			

SUBCONTRACT FLOW DOWN CLAUSES  
FEDERAL ACQUISITION REGULATION (FAR)

Revision Through FAC 84 33  
FAC Date 8 February 1988

TITLE	FAR CITATION	MANDATORY FLOW-DOWN	OPTIONAL	REMARKS
Termination (Personal Services) (APR 1984)	52.249-12			
Indemnification Under Public Law 85-804 (APR 1984)	52.250-1	No	Yes	If your prime contains this indemnification, you can, with the Contracting Officer's prior written approval, flow the indemnification down to your subs.

**APPENDIX D**  
**MASTER BIBLIOGRAPHY**

**FAR/DFARS AND RELATED SUPPLEMENTS**

<b>FAR/DFARS 2.1</b>	<b>Definitions of Words and Terms</b>
<b>FAR/DFARS 3.502</b>	<b>Subcontractor Kickbacks</b>
<b>FAR 6.100</b>	<b>Full and Open Competition</b>
<b>FAR 6.200</b>	<b>Full and Open Competition After Exclusion of Sources</b>
<b>FAR 6.300</b>	<b>Other Than Full and Open Competition</b>
<b>FAR/DFARS 7</b>	<b>Acquisition Planning</b>
<b>FAR 9.104-1</b>	<b>General Standards for Responsible Prospective Contractors</b>
<b>FAR/DFARS 10</b>	<b>Specifications, Standards, and Other Purchase Descriptions</b>
<b>FAR/DFARS 12.3</b>	<b>Priorities and Allocations</b>
<b>DFARS 12.302(70)</b>	<b>DoD Priorities and Allocations Manual</b>
<b>FAR/DFARS 15</b>	<b>Contracting by Negotiation</b>
<b>FAR/DFARS 15.7</b>	<b>Make-or-Buy Programs</b>
<b>FAR/DFARS 15.804-6</b>	<b>Procedural Requirements for Price Negotiations</b>
<b>FAR/DFARS 15.805-5</b>	<b>Field Pricing Support</b>
<b>FAR/DFARS 15.806</b>	<b>Subcontract Pricing Considerations</b>
<b>FAR/DFARS 19</b>	<b>Small Business and Small Disadvantaged Business</b>
<b>FAR/DFARS 19.7</b>	<b>Subcontracting with Small Business and Small Disadvantaged Business Concerns</b>
<b>FAR/DFARS 20</b>	<b>Labor Surplus Area Concerns</b>
<b>FAR 20.3</b>	<b>Labor Surplus Area Subcontracting Program</b>
<b>FAR/DFARS 22</b>	<b>Application of Labor Laws to Government Acquisitions</b>
<b>FAR/DFARS 22.8</b>	<b>Equal Employment Opportunity</b>
<b>FAR/DFARS 27</b>	<b>Patents, Data, and Copyrights</b>
<b>FAR/DFARS 27.4</b>	<b>Rights in Data and Copyrights</b>
<b>FAR/DFARS 32</b>	<b>Contract Financing</b>
<b>FAR/DFARS 32.502-1</b>	<b>Use of Customary Progress Payments</b>
<b>FAR 32.504</b>	<b>Control Financing for Subcontracts</b>

<b>FAR/DFARS 34</b>	<b>Major System Acquisition</b>
<b>FAR/DFARS 35</b>	<b>Research and Development Contracting</b>
<b>FAR/DFARS 42</b>	<b>Contract Administration</b>
<b>FAR/DFARS 42.2</b>	<b>Assignment of Contract Administration</b>
<b>FAR 42.201</b>	<b>Definition of Contract Administration</b>
<b>FAR/DFARS 42.203</b>	<b>Retention of Contract Administration</b>
<b>FAR/DFARS 42.204</b>	<b>Supporting Contract Administration</b>
<b>FAR/DFARS 43</b>	<b>Contract Modifications</b>
<b>FAR/DFARS 44</b>	<b>Subcontracting Policies and Procedures</b>
<b>FAR 44.1</b>	<b>Definitions and Policy for Subcontracting</b>
<b>FAR 44.101</b>	<b>Definitions for Subcontracting</b>
<b>FAR 44.2</b>	<b>Consent to Subcontracts</b>
<b>FAR 44.204</b>	<b>Contract Clauses for Consent to Subcontract</b>
<b>FAR 44.205</b>	<b>Special Surveillance for Subcontracting</b>
<b>FAR/DFARS 44.3</b>	<b>Contractors' Purchasing Systems Reviews</b>
<b>FAR/DFARS 45</b>	<b>Government Property</b>
<b>FAR/DFARS 45.5</b>	<b>Management of Government Property in the Possession of Contractors</b>
<b>FAR/DFARS 46</b>	<b>Quality Assurance</b>
<b>FAR/DFARS 49</b>	<b>Termination of Contracts</b>
<b>FAR/DFARS 52</b>	<b>Solicitation Provisions and Contract Clauses</b>
<b>FAR 52.208-1</b>	<b>Required Sources for Jewel Bearings and Related Items</b>
<b>FAR 52.244</b>	<b>Subcontracts</b>
<b>DAR Sup 1</b>	<b>Defense Acquisition Regulation Supplement No. 1 - Contractor Purchasing System Review (CPSR) Program</b>
<b>DAR Sup 1 SI-307-2</b>	<b>Intra-Company Transactions</b>
<b>DAR Sup 1 SI-307-6</b>	<b>Subcontractor Responsibility and Vendor Performance Rating System</b>

<b>AF FAR SUP</b>	<b>Air Force Federal Acquisition Regulation Supplement</b>
<b>AFSC FAR Sup 27</b>	<b>Patents, Data, and Copyrights</b>
<b>AFSC FAR Sup 27.305</b>	<b>Administration of Patent Rights Clauses</b>
<b>AFSC FAR Sup 27.4</b>	<b>Technical Data, Other Data, Computer Software, and Copyrights</b>
<b>AFSC FAR Sup 42.2</b>	<b>Assignment of Contract Administration</b>
<b>AFSC FAR Sup 42.3</b>	<b>Contract Administration Office Functions</b>
<b>AFSC FAR Sup 44.390-6</b>	<b>Subcontract Management Procedures</b>
<b>AFSC FAR Sup 52.244-9000</b>	<b>Subcontract Management Plan</b>
<b>AFSC FAR Sup 52.244-9001</b>	<b>Subcontract Management</b>
<b>AFCMD FAR SUP</b>	<b>Air Force Contract Management Division Federal Acquisition Regulation Supplement</b>

#### **DOD REFERENCES**

<b>DoD 4105.59-H</b>	<b>DoD Directory of Contract Administrative Services Components</b>
<b>DoD 4245.7-M</b>	<b>Transition from Development to Production</b>
<b>DoD 4245.8-H</b>	<b>Value Engineering</b>
<b>DoD-HDBK-287</b>	<b>Defense System Software Development Handbook</b>
<b>DoDD 4120.3</b>	<b>Defense Standardization and Specification Program</b>
<b>DoDD 4120.21</b>	<b>Application of Specifications, Standards, and Related Documents in the Acquisition Process</b>
<b>DoDI 4140.41</b>	<b>Government-Owned Materiel Assets Utilized as Government-Furnished Materiel for Major Acquisition Programs</b>
<b>DoDI 4151.9</b>	<b>Technical Manual Program Management</b>
<b>DoDD 4155.1</b>	<b>Quality Program</b>
<b>DoDI 4155.20</b>	<b>Contractor Assessment</b>
<b>DoDI 4200.15</b>	<b>Manufacturing Technology Program</b>
<b>DoDD 4245.6</b>	<b>Defense Production Management</b>
<b>DoDD 4245.7</b>	<b>Transition from Development to Production</b>
<b>DoDD 4245.8</b>	<b>DoD Value Engineering Program</b>

DoDD 4245.9	Competitive Acquisitions
DoDI 4400.1	Priorities and Allocations - Delegation of DC and DX Priorities and Allocations Authorities, Rescheduling of Deliveries and Continuance of Related Manuals
DoDD 5000.1	Major and Non-Major Defense Acquisition Programs
DoDI 5000.2	Defense Acquisition Program Procedures
DoDI 5000.38	Production Readiness Reviews
DoDD 5000.39	Acquisition and Management of Integrated Logistic Support for Systems and Equipment
DoDD 5000.40	Reliability and Maintainability
DoDD 5000.43	Acquisition Streamlining
DoDD 5000.44	Industrial Modernization Incentives Program (IMIP)
DoDD 5010.19	Configuration Management
DoDI 5010.12	Management of Technical Data
DoDI 7000.2	Performance Measurement for Selected Acquisitions
DoDI 7000.3	Selected Acquisition Reports
DoDI 7000.10	Contract Cost Performance, Funds Status and Cost/Schedule Status Reports
DoDI 7000.11	Contractor Cost Data Reporting

#### AIR FORCE REFERENCES

AFR 57-1	Operational Needs
AFR 65-3/AFSC SUP	Configuration Management
AFR 70-14	Business Strategy Panels
AFR 70-15	Source Selection Policy and Procedures
AFR 70-16	Contract Management in Major Program Acquisition
AFR 70-27	Acquisition Management Review
AFR 70-30	Streamlined Source Selection Procedures
AFR 74-1	Quality Assurance Program
AFR 74-4	The DoD Quality System Review Program

AFR 320-1/AFSC SUP	Air Force Value Engineering Program
AFP 320-2	Value Engineering - Guide for Contractors
AFR 400-25	Logistics Plans Management
AFR 800-2	Acquisition Program Management
AFR 800-3	Acquisition Management - Engineering for Defense Systems
AFR 800-8/AFSC SUP	Integrated Logistics Support (ILS) Program
AFR 800-9	Manufacturing Management Policy for Air Force Programs
AFR 800-18	Air Force Reliability and Maintenance Policy
AFR 800-22	CFE vs. GFE Selection Process
AFR 800-25/AFSC SUP	Acquisition Program Baselineing
AFR 800-33	Manufacturing Technology Program
AFR 800-35/AFSC SUP	Air Force Competition Advocate Program
AFR 800-37	Policies and Procedures for Transition from Development to Production
AFR 800-38	Industrial Modernization Incentives Program
AFSC R 74-1	AFSC Quality Assurance Program
AFSC P 74-4	Guide for Quality Assurance Managers
AFSC R 78-2	Defense Materials and Priorities Systems
AFSC R 84-2	Production Readiness Review
AFSC P 84-4	AFSC Guide for Manufacturing Reviews
AFSC P 173-5	Cost/Schedule Control Systems Criteria (Joint Implementation Guide)
AFSC R 800-2	Management of Multi-Service Systems, Programs and Projects
AFSC P 800-3	A Guide for Program Management
AFSC P 800-7	Configuration Management
AFSC R 800-9	Manufacturing Management
AFSC R 800-10	Acquisition Logistics Status of Programs
AFSC P 800-14	Software Quality Indicators

AFSC R 800-16	Acquisition and Management of Technical Data and Computer Software
AFSC R 800-17	Technology Modernization (TECH MOD)
AFSC P 800-18	User's Guide for the Management of Technical Data and Computer Software
AFSC R 800-21	Subcontracting Management
AFSC/AFLC R 800-31	Government-Furnished Equipment/Contractor-Furnished Equipment (GFE/CFE) Selection Process, GFE Acquisition and GFE Management
AFSC/AFLC P 800-34	Acquisition Logistics Management
AFSC R 800-42	Program Office and AFCMD Interface
AFSC P 800-43	Software Management Indicators
AFCMD R 71-3	AFCMD Federal Acquisition Regulation (FAR) Supplement Management
AFCMD R 70-17	Contract Administration
AFCMD P 70-21	Contract Administration Reference Handbook
AFCMD R 70-24	Subcontract Management Mission and Policy
AFCMD R 74-1	Quality Assurance Program
AFCMD P 74-6	Integrated Contractor Assessment Program (ICAP) Quality Assurance (QA) Evaluation
AFCMD R 84-1	Manufacturing Operations
AFCMD P 84-7	Production Surveillance and Status Reporting
AFCMD R 540-13	Industrial Modernization Technology Modernization (TECH MOD)/Incentives Program (IMIP)
AFCMD R 540-16	User Involvement in AFCMD CAS QA Functions
AFCMD R 540-17	Acquisition Management Information System
AFCMD R 800-1	Contract Management Engineering
AFCMD R 800-8	Integrated Logistics Support (ILS)
AFCMD R 800-11	AFCMD Memorandum of Agreement Management System

**ARMY REFERENCES**

AR 11-4	System Program Reviews (SPR)
AR 15-14	Systems Acquisition Review Council Procedures
AR 70-1	Systems Acquisition Policy and Procedures
AR 70-6	Management of Research, Development, Test and Evaluation
AR 70-15	Service Contract Administration
AR 70-17	System/Program/Project/Product Management
AR 70-37	Configuration Management
AR 70-67	Production Readiness Reviews
AR 70-72	Production Management
AR 602-1	Human Factors Engineering Programs
AR 700-127	Integrated Logistics Support
AR 700-129	Integrated Logistics Support Management of Multi-service Communications - Electronics Systems and Equipments
AR 702-3	Army Materiel Systems Reliability, Availability, and Maintainability
AR 715-11	Army Procurement Management Review Program
AMC P11 3	Value Engineering Program Management Guidelines
AMC R11-16	Program/Project/Product Management
AMC R11-45	AMC Policy Compliance Reviews
AMC/TRADOC P70-2	Materiel Acquisition Handbook
AMC P70-4	Software Acquisition - A Guide for the Materiel Developer
AMC R70-6	Productibility Engineering and Planning
AMC R70-8	AMC Value Engineering Program
AMC R70-9	Human Factors Engineering During System Development
AMC P70-14	Software Quality Indicators
AMC R70-59	Acquisition Management-Management of Multi-Service Systems, Programs and Projects
AMC R700-6	AMC Quality Assurance System
AMC P700-11	Logistics Support Analysis Techniques Guide

AMC R700-15	Integrated Logistics Support
AMC R702-6	Product Quality Management
AMC R702-10	Quality Assurance Provisions for Army Materiel
AMC P702-12	Product Assurance Industrial Training Doctrine
AMC P702-13	A Guide to Product Quality Management
AMC R702-16	Army In-Plant Procurement Quality Assurance Program Reviews
AMC R715-2	Cost/Schedule Control and Information System for Use in the Acquisition Process
AMC R715-3	Systems Acquisition Planning and Reviews
AMC P715-5	Cost/Schedule Control Systems Criteria Joint Implementation
AMC P715-9	Competition Decision Assistance Package
AMC P715-10	C/SCSC Joint Surveillance Guide
AMC R715-510	Acquisition and Management of Technical Data and Computer Software
AMC SIAR70-15	Product Improvement of Materiel
AMC SIAR70-17	System/Program/Project/Project Management
AMC SIAR70-37	Configuration Management
Army Field Manual 770-78	Systems Engineering
<b>NAVY REFERENCES</b>	
SECNAV Inst 4210.6	Acquisition Policy
SECNAV Inst 4210.7	Effective Acquisition of Navy Material
SECNAV Inst 4330.15A	Department of the Navy Field Contract Administration
SECNAV Inst 4800.11A	Manufacturing Technology Program
SECNAV Inst 4801.1B	Defense Production Management
SECNAV Inst 4855.1	Quality Assurance Program
SECNAV Inst 5000.1B	System Acquisition
SECNAV Inst 5000.39A	Acquisition and Management of Integrated Logistic Support (ILS) for Systems and Equipment

OPNAV Inst 4105.2	Integrated Logistics Support Management of Multiservice Communications - Electronics Systems and Equipment
OPNAV Inst 4130.2	Navy Configuration Management System - Ships, Ship Equipments and Selected Shorebased Equipments (NCMS); Policy for
OPNAV Inst 5000.42	Integrated Logistic Support (ILS) in the Acquisition Process
NAVMAT Inst 4000.20B	Integrated Logistic Support Planning Policy
NAVMAT Inst 4105.3A	Integrated Logistic Support (ILS) Review and Appraisal
NAVMAT Inst 4130.6	Configuration Management
NAVMAT Inst 4200.54	Procurement Management Review (PMR) Program
NAVMAT Inst 4355.69A	Procurement Quality Assurance
NAVMAT Inst 4800.36D	Manufacturing Technology Program
NAVMAT Inst 4801.2A	Production Readiness Reviews (PRR)
NAVMAT Inst 4855.1A	Quality Assurance Policy for the Naval Material Command
NAVMAT Inst 4855.9	Product Deficiency Reporting and Evaluation Program (PDREP)
NAVMAT Inst 4855.10	Contractual Manufacturing Requirements
NAVMAT Inst 5000.19E	Acquisition Program Review
NAVMAT Inst 5210.4	Acquisition Program Documentation
NAVMAT P-5240	Cost/Schedule Control Systems Criteria (Joint Implementation Guide)
NAVMAT Inst 9020.1B	Standard in Shipboard Command and Control Space Configurations; Policies and Procedures for
NAVAIR Inst 4000.2C	Integrated Logistic Support for Aeronautical Systems and Engineering
NAVAIR Inst 4000.12	Integrated Logistic Support Management Organizations and Responsibilities
NAVAIR Inst 4340.3A	Provisions of Material in Long Supply to Prime Contractors as Government Furnished Material
NAVAIR Inst 4720.3B	Approval for Production Policy and Procedures
NAVAIR Inst 4800.2	Manufacturing Technology Program

NAVAIR Inst 5000.13A	Program and Acquisition Review Procedures
NAVAIR Inst 5400.23C	Quality Assurance Program of the Naval Air Systems Command
NAVELEX Inst 4000.6D	Integrated Logistic Support (ILS); Policy and Responsibilities
NAVELEX Inst 4000.10	Integrated Logistic Support Plans for Electronic Systems and Equipments
NAVELEX Inst 4000.13	Logistic Assessment Review (LAR)
NAVELEX Inst 4120.14	Technical Reviews and Audits for Systems, Equipments and Computer Programs, MIL-STD-1521 (USAF); Guidance on use of
NAVELEX Inst 4130.1	Configuration Management of NAVELFX Systems/Equipments
NAVELEX Inst 5420.5A	NAVELEX Control and Review Boards for Configuration Management (CM); Establishment of
NAVSEA Inst 4855.5A	Quality Assurance Program for the Naval Sea Systems Command
NAVSEA Inst 4200.1B	NAVSEA Contractor Procurement System Review Program
NAVSEA Inst 4200.12A	Procurement Management Review (PMR) Program; Responsibility and Procedures for
NAVSUP Inst 4858.52	Value Engineering (VE) Program
NAVCOMPT Inst 5230.1	Automatic Data Processing Services Procured by Contract
NAVCOMPT Inst 7000.38A	Productivity Enhancing Incentive Fund (PEIF)/The Productivity Enhancement Capital Investment Fast Payback Program
NAVSO P-2457	RDT&E/Acquisition Management Guide, 10th Edition, January 1987
NAVSO P-3637	DoD FAR Supplement (DFARS)
NAVSO P-6071	Best Practices - How to Avoid Surprises in the World's Most Complicated Technical Process - The Transition from Development to Production

#### JOINT REFERENCES

AMC 715-10/AFSCP 173-6/  
AFLCP 173-5/NAVMAT  
P-5243/DLAH 8315

Cost/Schedule Control Systems Criteria (C/SCSC) Joint Surveillance Guide

AMC P715-15/AFSCR

800-16/AFLCR 800-16/  
 NAVSO P-3650/  
 DLAH 8400.1

Acquisition and Management of Technical Data and Computer  
 Software

#### **MILITARY SPECIFICATIONS AND STANDARDS**

MIL-Q-9858A	Quality Program Requirements
MIL-I-45208A	Inspection System Requirements Report, Material Inspection System
MIL-S-52779A	Software Quality Assurance Program Requirements
DoD-STD-480A	Configuration Control - Engineering Changes, Deviations and Waivers
DoD-STD-2167A	Defense System Software Development
DoD-STD-2168	Defense System Software Quality Program
MIL-STD-481A	Configuration Control - Engineering Changes, Deviations and Waivers (Short Form)
MIL-STD-482A	Configuration Status Accounting Data Elements and Related Features
MIL-STD-483A	Configuration Management Practices for Systems, Equipment, Munitions and Computer Software
MIL-STD-490A	Specification Practices
MIL-STD-499A	Engineering Management
MIL-STD-1388-2A	DoD Requirements for a Logistic Support Analysis Record
MIL-STD-1369A	Integrated Logistic Support Program Requirements
MIL-STD-1456	Contractor Configuration Management Plans
MIL-STD-1520C	Corrective Action and Disposition System for Nonconforming Material
MIL-STD-1521B	Technical Reviews and Audits for Systems, Equipment, and Computer Programs
MIL-STD-1528	Production Management
MIL-STD-1535A	Supplier Quality Assurance Program Requirements
MIL-STD-1567A	Work Measurement

#### **DSMC REFERENCES**

"Integrated Logistics Support Guide," DSMC, May 1986.

"Introduction to DoD Program Management," (Advance Copy) DSMC, April 1986.

"Manufacturing Management Handbook," Second Edition, DSMC, July 1984.

"Program Manager's Notebook," DSMC, October 1985.

"Study of Increasing Lead Time in Major Weapon Systems Acquisition," Technical Report, DSMC, July 1981.

"System Engineering Management Guide," Second Edition, DSMC, December 1986.

#### **OTHER GOVERNMENT REFERENCES**

"Defense Priorities & Allocations System (DPAS)," Dept. of Commerce Reg 15 CFR 350, (Third Printing May 1987), October 1984.

GAO Report NSIAD-85-131 "Management Improvement," 6 September 1985

Major Donald L. Brechtel, USAF, "Subcontracting Management: A Frontier of Opportunity," Research Report No. AU-ARI-85-3, Air University, June 1985.

"Manufacturing Lead Times," Navy Shipbuilding Scheduling Office, Philadelphia Naval Shipyard. Published Quarterly.

OMB Circular A-109            Major System Acquisitions

"Prime Contract Awards - First Half Fiscal Year 1987," DoD DIOR Report P03, Directorate for Information Operations and Reports. AD-A182 257.

"Program Manager," DSMC Magazine, Jan-Feb. 1986 issue.

Subcontracting Management Course Material, Subcontracting Management Course, AFSC Systems Acquisition School, Brooks AFB, San Antonio, TX.

"The Role of the Department of Defense in Supporting Manufacturing Technology Development," National Research Council, Manufacturing Studies Board, National Science Foundation, March 1986.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE				Form Approved OMB No 0704-0188	
1a REPORT SECURITY CLASSIFICATION Unclassified		1d RESTRICTIVE MARKINGS			
2a SECURITY CLASSIFICATION AUTHORITY		3 DISTRIBUTION/AVAILABILITY OF REPORT			
2b DECLASSIFICATION/DOWNGRADING SCHEDULE		"A" approved for public release, distribution unlimited			
4 PERFORMING ORGANIZATION REPORT NUMBER(S)			5 MONITORING ORGANIZATION REPORT NUMBER(S)		
6a NAME OF PERFORMING ORGANIZATION DAI, Incorporated		6b OFFICE SYMBOL (if applicable)	7a NAME OF MONITORING ORGANIZATION Business Department Defense Systems Management College (DSMC)		
6c ADDRESS (City, State, and ZIP Code) 7652 Standish Place Rockville, Maryland 20855			7b ADDRESS (City, State, and ZIP Code) Fort Belvoir, VA 22060-5426		
8a NAME OF FUNDING/SPONSORING ORGANIZATION DSMC		8b OFFICE SYMBOL (if applicable)	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER Contract MDA903-85-G-0008, Del Order 0002 Task Order 86-2		
8c ADDRESS (City, State, and ZIP Code) Fort Belvoir, VA 22060-5426			10 SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO	PROJECT NO	TASK NO
					FORM UNIT ACCESSION NO
11 TITLE (Include Security Classification) Subcontracting Management Handbook, First Edition 1988					
12 PERSONAL AUTHOR(S) William B Humphrey and John N Postak					
13a TYPE OF REPORT Final		13b TIME COVERED FROM _____ TO _____		14 DATE OF REPORT (Year, Month, Day) May 1988	15 PAGE COUNT 137
16 SUPPLEMENTARY NOTATION					
17 COSATI CODES			18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	Subcontracting Management, Acquisition Program, Program Management, Program Management Office, Defense Contract Administration Services, Contract Administration Office		
19 ABSTRACT (Continue on reverse if necessary and identify by block number)					
<p>This handbook is designed to be a ready reference on the concept of subcontracting management for DoD Program Management Office (PMO) staffs, Contract Administration Offices (CAO) personnel, and Defense Systems Management College (DSMC) students and faculty. Subcontracting management is defined as a concept that addresses subcontracting issues and the Government's role in ensuring successful prime contractor interaction with subcontractors in order to satisfy prime contract requirements. Since much of an acquisition program may well be "in the hands" of subcontractors, it behooves the Government Program Manager (PM) to oversee key aspects of subcontracting management in order to ensure the success of the PM's acquisition program. The handbook discusses the need for the concept, the environment within which it exists and the techniques recommended for use. Primary Department of Defense (DoD) and Service directives that are applicable to the various techniques are cited. In addition, there are four appendices that provide the handbook user with a list of relevant acronyms and terms, a generic example of a Memorandum of Agreement (MOA), a list of Federal Acquisition Regulation (FAR) Subcontract Flow Down Clauses, and a master bibliography.</p>					
20 DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21 ABSTRACT SECURITY CLASSIFICATION Unclassified		
22a NAME OF RESPONSIBLE INDIVIDUAL LtCol Wilson Summers, USAF			22b TELEPHONE (Include Area Code) (703) 664-6685	22c OFFICE SYMBOL DSMC-SE-B	

DD Form 1473, JUN 86

Previous editions are obsolete

SECURITY CLASSIFICATION OF THIS PAGE

UNCLASSIFIED