

AD-A271 848



2

NAVAL POSTGRADUATE SCHOOL
Monterey, California



DTIC
ELECTRONIC
NOV 01 1993
S E

THESIS

AN EVALUATION
OF THE
DEPARTMENT OF DEFENSE
CONTRACTOR RISK ASSESSMENT GUIDE PROGRAM

by

Robert F. Miedzinski

June 1993

Principal Advisor:

David V. Lamm

Approved for public release; distribution is unlimited.

93 10 29 015

93-26283



Unclassified

Security Classification of this page

REPORT DOCUMENTATION PAGE				
1a Report Security Classification: Unclassified			1b Restrictive Markings	
2a Security Classification Authority			3 Distribution/Availability of Report	
2b Declassification/Downgrading Schedule			Approved for public release; distribution is unlimited.	
4 Performing Organization Report Number(s)			5 Monitoring Organization Report Number(s)	
6a Name of Performing Organization Naval Postgraduate School		6b Office Symbol (if applicable) 36	7a Name of Monitoring Organization Naval Postgraduate School	
6c Address (city, state, and ZIP code) Monterey CA 93943-5000			7b Address (city, state, and ZIP code) Monterey CA 93943-5000	
8a Name of Funding/Sponsoring Organization		6b Office Symbol (if applicable)	9 Procurement Instrument Identification Number	
Address (city, state, and ZIP code)			10 Source of Funding Numbers	
			Program Element No	Project No Task No Work Unit Accession No
11 Title (include security classification) AN EVALUATION OF THE DEPARTMENT OF DEFENSE CONTRACTOR RISK ASSESSMENT GUIDE PROGRAM				
12 Personal Author(s) Robert F. Miedzinski				
13a Type of Report Master's Thesis		13b Time Covered From To	14 Date of Report (year, month, day) 1993 June 1	15 Page Count 121
16 Supplementary Notation The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
17 Cosati Codes			18 Subject Terms (continue on reverse if necessary and identify by block number)	
Field	Group	Subgroup	CRAG, Risk Assessment, Accounting, Internal Controls	
19 Abstract (continue on reverse if necessary and identify by block number)				
The Contractor Risk Assessment Guide Program (CRAG) was developed in 1988 in response to a primary recommendation of the President's Blue Ribbon Panel on Defense Management that the Government promote contractor self-governance as a means to improve the efficiency and effectiveness of Government oversight. This thesis reviews the background leading to the development of the CRAG program and reviews the individual Chapters of the CRAG program. The objectives of the thesis are to assess the achievement of the goals of the CRAG program since its implementation, identify any deficiencies in the CRAG as it exists, make recommendations for modification of the program and provide a medium for Government and defense industry personnel to express their opinions on the relative success of the CRAG. The research resulted in the conclusion that the CRAG has met its goals of improving contractor internal control systems and improving the efficiency and effectiveness of Government oversight efforts. The research also resulted in recommendations by the researcher of methods to enhance promotion of the CRAG and its benefits to the defense industry.				
20 Distribution/Availability of Abstract XX unclassified/unlimited same as report DTIC users			21 Abstract Security Classification Unclassified	
22a Name of Responsible Individual David V. Lamm			22b Telephone (include Area Code) (408) 656-2775	22c Office Symbol AS/Lt

DD FORM 1473, 84 MAR

83 APR edition may be used until exhausted

security classification of this page

All other editions are obsolete

Unclassified

Approved for public release; distribution is unlimited.

AN EVALUATION
OF THE
DEPARTMENT OF DEFENSE
CONTRACTOR RISK ASSESSMENT GUIDE PROGRAM

by

Robert F. Miedzinski
Lieutenant, United States Navy
B.S., Towson State University

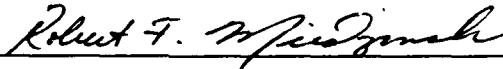
Submitted in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

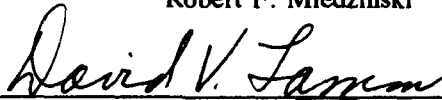
NAVAL POSTGRADUATE SCHOOL
JUNE 1993

Author:

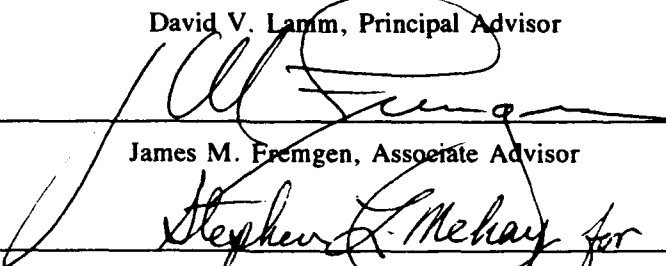


Robert F. Miedzinski

Approved by:



David V. Lamm, Principal Advisor



James M. Fremgen, Associate Advisor



David R. Whipple, Chairman
Department of Administrative Sciences

ABSTRACT

The Contractor Risk Assessment Guide Program (CRAG) was developed in 1988 in response to a primary recommendation of the President's Blue Ribbon Panel on Defense Management that the Government promote contractor self-governance as a means to improve the efficiency and effectiveness of Government oversight.

This thesis reviews the background leading to the development of the CRAG program and reviews the individual Chapters of the CRAG program.

The objectives of the thesis are to assess the achievement of the goals of the CRAG program since its implementation, identify any deficiencies in the CRAG as it exists, make recommendations for modification of the program and provide a medium for Government and defense industry personnel to express their opinions on the relative success of the CRAG.

The research resulted in the conclusion that the CRAG has met its goals of improving contractor internal control systems and improving the efficiency and effectiveness of Government oversight efforts. The research also resulted in recommendations by the researcher of methods to enhance promotion of the CRAG and its benefits to the defense industry.

Accession For	
NTIS	☒
CRA&I	☒
DTIC	☐
TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

TABLE OF CONTENTS

I.	INTRODUCTION	1
A.	GENERAL OVERVIEW	1
B.	OBJECTIVES OF RESEARCH	5
C.	SCOPE OF THESIS	6
D.	RESEARCH QUESTIONS	6
E.	RESEARCH METHODOLOGY	7
F.	ORGANIZATION OF THE STUDY	7
II.	BACKGROUND	9
A.	PUBLIC TRUST AND THE CALL FOR REFORM	9
B.	EXECUTIVE ORDER 12526	13
C.	THE PACKARD COMMISSION	14
D.	THE DEFENSE INDUSTRY INITIATIVE	17
E.	THE CRAG STEERING GROUP	20
F.	THE DEFENSE MANAGEMENT REPORT	23
G.	SELF-GOVERNANCE AND INTERNAL CONTROLS	25
H.	THE CRAG PROGRAM	28
I.	SUMMARY	31
III.	DEFENSE INDUSTRY OPINIONS AND ANALYSIS	33
A.	OVERVIEW	33
B.	SURVEY QUESTIONS	34

1. Question #2, Familiarity With CRAG: . . .	34
2. Questions #3 and #3A, Application for Participation:	36
3. Question #3B, Future Application for Participation:	39
4. Question #3C, Planned Expansion or Reduction in CRAG:	41
5. Question #4, Adequacy of Qualification Description:	43
6. Question #5, Areas of Contractor Participation in CRAG:	45
7. Question #6, Implementation Difficulty: . .	47
8. Question #7, CRAG Chapters Not Chosen for Participation:	49
9. Question #8, Reduction In Oversight:	51
10. Question #9, Increase In Oversight: . .	53
11. Question #10, Maintaining Compliance with CRAG:	54
12. Question #11, Recommendations For CRAG Improvement:	56
13. Question #12, Recommendations For New CRAG Chapters:	58
14. Question #13, Modification or Cancellation of CRAG:	58
15. Question #14, Recommendations For CRAG Alternatives:	60

C.	SUMMARY	61
IV.	GOVERNMENT OPINIONS AND ANALYSIS	63
A.	OVERVIEW	63
B.	SURVEY QUESTIONS	65
1.	Question #2, Familiarity With CRAG:	65
2.	Question #3, Benefits of CRAG to Government:	66
3.	Question #4, Benefits of CRAG to Contractors:	67
4.	Question #5, Type of Training Experienced:	69
5.	Question #6, Adequacy of Training:	70
6.	Question #7, Promotion of the CRAG Program:	72
7.	Question #8, Adequacy of Qualification Descriptions:	74
8.	Question #9, Voluntary or Mandatory Participation:	76
9.	Question #10, Difficulty in Implementation:	77
10.	Question #11, Increased or Decreased Oversight:	79
11.	Question #12, Specific Data on Contractor Participation:	81
12.	Question #13, Modification or Cancellation of CRAG:	82
C.	ADDITIONAL DATA	83
D.	SUMMARY	85

V.	CONCLUSIONS AND RECOMMENDATIONS	87
A.	CONCLUSIONS	87
B.	RECOMMENDATIONS	89
C.	ANSWERS TO THE RESEARCH QUESTIONS	92
D.	AREAS FOR FURTHER RESEARCH	96
	APPENDIX A - LIST OF ABBREVIATIONS	97
	APPENDIX B - EXCERPT FROM CRAG GUIDE	98
	1. Indirect Cost Submissions	98
	2. Labor Charging	98
	3. Material Management And Accounting Systems .	99
	4. Estimating Systems:	100
	5. Purchasing	100
	APPENDIX C - CRAG QUESTIONNAIRE FOR INDUSTRY	103
	APPENDIX D - CRAG QUESTIONNAIRE FOR GOVERNMENT	106
	LIST OF REFERENCES	-108-
	INITIAL DISTRIBUTION LIST	-111-

I. INTRODUCTION

A. GENERAL OVERVIEW

On July 15, 1985, President Reagan issued Executive Order 12526 which established The Blue Ribbon Commission on Defense Management. The Commission, known as the Packard Commission, was formed with a broad charter to study Defense Management practices in general and to specifically review the procurement processes and make recommendations for improvement. [Ref. 1:p. 162] One of its conclusions was that "significant improvements in corporate self-governance can redress shortcomings in the procurement system and create a more productive working relationship between Government and industry." [Ref. 2:p. 5]

As a direct result of this finding, the Contractor Risk Assessment Guide (CRAG)¹ program was established in October 1988 and implemented in November of the same year. The CRAG program was developed by representatives from all facets of the Defense Industry, including the Department of Defense Inspector General (DODIG), Defense Contract Audit Agency (DCAA), Department of Defense (DOD) acquisition community and the Council of Defense and Space Industry Associations

¹A list of abbreviations can be found in Appendix A.

(CODSIA), who represented the contractors. [Refs. 3:p. i and 4:p. 15].

The intent of the CRAG is to improve DOD oversight practices and to improve or facilitate the implementation of contractors' internal control systems. The program is voluntary on the part of the DOD contractors and is designed for the Government to assess each contractor's internal control systems to better determine the appropriate amount of oversight required to ensure that the public interest is being protected. With the ultimate goal of maximizing effectiveness and efficiency in Government oversight, participation in the CRAG allows the Government to concentrate its efforts on known problem areas rather than expend time and effort on areas deemed adequately monitored and controlled by the contractor. Participation in the program does not exempt the contractor from receiving oversight, but it leads to a potential for reduction in the extent of oversight required for specific program areas.

The areas of the procurement process that have been identified as high-risk in the CRAG and that are available for consideration of reduced oversight include:

- Indirect Cost Submissions (IDC)
- Labor Charging (LC)
- Material Management and Accounting Systems (MMAS)
- Estimating Systems (ES)
- Purchasing (PUR)

Each area has its own control objective that must be achieved. Supporting each control objective are a number of major controls that must be established in support of CRAG participation. The contractor has the option of determining the extent of participation in these areas. However, the final determination of contractor qualification rests with the Government.

The number and magnitude of Government contracts held by individual contractors (coupled with the respective oversight efforts) and the quality of their existing internal control systems are determinants in the decision of whether or not to participate in the program. Because there is no guarantee that oversight will be reduced by their participation in the program, many corporations expressed a hesitancy to apply for CRAG participation.

The following issues have been identified as other barriers leading to a reluctance by defense contractors to participate in the CRAG:

- Lack of awareness of some DOD contractor personnel that the CRAG program exists.
- Lack of confidence on the part of both industry and Government personnel that identified deficiencies will be corrected.
- Lack of confidence on the part of industry that oversight is actually reduced.
- Contractors' perception that implementation of internal controls is not worth the effort because of the risk of not having their processes approved. The benefits may not outweigh the costs.

- Lack of cooperation and trust between Government agencies and contractors.
- Lack of coordination between the various Government agencies with oversight and audit responsibilities.
[Ref. 5:p. 2]

In its report to the Packard Commission, Arthur Andersen & Co., an international accounting and consulting firm, concluded that all the contractors they surveyed

...have been subject to duplicative, overlapping, and inefficient Government auditing and oversight activities. The amount of duplication and overlap varies from contractor to contractor. While most matters of concern relate to DCAA, Defense Contract Administration Service (DCAS), and the procuring agencies, several instances were noted of apparent duplication and inefficiency involving the Inspector General and General Accounting Office (GAO). Changes are clearly required to enhance efficiency and reduce costs to both contractors and the Government.
[Ref. 2:p. 133]

The CRAG program is designed to ensure that the DOD oversight is "commensurate with the quality and reliability of contractor internal control systems." [Ref. 4:p. 17] By sharing audit and compliance review results through acceptable internal control systems, both Government and industry will optimize the benefits of the program.

Other than reduced oversight, additional value accorded the CRAG program by the Steering Group is as follows:

The value of the CRAG Program to both Government and industry is that it is a long-term program with a goal of improving the DOD oversight and procurement processes and enhancing the image of Government contracting in the eyes of the Congress and the public....The CRAG program provides the framework for industry to demonstrate to the Government that strong, effective internal controls are in place and functioning as intended. [Ref. 3:p. i]

This is supportive of the suggestion by the Packard Commission that "contractors must do much more than they have done in the past to comply with contractual, regulatory, and statutory standards." [Ref. 2:p. 7]

The CRAG has been in existence for more than 4 years and there continues to be an apparent reluctance by the defense industrial community to embrace the program. Many seem still unconvinced that oversight reduction can be a reality. This thesis will examine available data to draw conclusions about the relative success or failure of the CRAG program to meet its objectives.

B. OBJECTIVES OF RESEARCH

The objectives of this study are to review and evaluate contractors' participation in the CRAG program to (1) assess the CRAG program since its implementation to analyze the achievement of its goals, (2) identify any deficiencies in the CRAG as it exists, (3) recommend any additions, modifications or deletions to/from the program to correct deficiencies and (4) gain a better understanding of the relationship between the Government and the defense industry during the exercise of oversight responsibilities in the performance of a contract. An additional objective of this study is to present a forum whereby Government and industry can share information so that they will better comprehend each others' positions with regard to participation in the CRAG program and correct any

misconceptions about the benefits of this or a similar program.

The intended goal of this research is to provide information input that will facilitate the improvement of the efficiency and effectiveness of Government oversight responsibilities by DOD and industry activities.

C. SCOPE OF THESIS

The scope of this thesis is to assess the CRAG program since its implementation in 1988 to include an analysis of the achievement of its goals and whether any modifications are required. Not every contractor and not every DOD agency with oversight responsibility was given the opportunity to give input for inclusion in the study. A representative sample of primary Government activities and defense industry corporations was solicited for comments and opinions about the program and its goals.

D. RESEARCH QUESTIONS

To achieve the stated objectives, the following primary research question is presented: To what extent has the CRAG program achieved its goals and objectives and what modifications, if any, should be made to the program to increase its use and improve its benefits to both Government and the defense industry?

In support of the primary question, the following subsidiary questions were developed to help analyze the CRAG program:

- What is the CRAG and what are its key objectives?
- What areas of the CRAG do contractors choose/not choose to participate in and what is their reaction to the program as a whole? What are the views of contractors actively involved in any aspect of the program and the views of those who are not participants?
- What is the Government's position on implementation of the CRAG program?
- What have been the principal deficiencies in the CRAG as noted by both Government and industry representatives and what actions can be taken to correct those deficiencies?
- What are the changes to be made to the CRAG to enhance its effectiveness? Should the program be more directed or should it be replaced by an alternative program? Should the goals be altered through greater emphasis, deemphasized or completely changed?

E. RESEARCH METHODOLOGY

The method for conducting the study involved a review of the existing literature on the CRAG, surveys mailed to a number of primary defense contractors, surveys mailed to a number of Government activities with oversight responsibilities, and phone and personal interviews with Government and contractor personnel.

F. ORGANIZATION OF THE STUDY

This study consists of five chapters. Chapter I contains an introduction to the scope, purpose and methodology of the study and the research questions utilized in this study.

Chapter II provides the background of the CRAG program which encompasses the state of defense acquisition prior to the Packard Commission and the development of the CRAG. Also included in Chapter II are the concepts of self-governance and internal controls, an overview of the CRAG objectives, and the responsibilities of all parties involved in CRAG.

Chapters III and IV contain the results of the research questionnaires for industry and Government, respectively. Included in each chapter are the responses to each question, with a graphical presentation of the results and their numerical distribution, and analyses of the results. Also included in Chapters III and IV are general observations made by the researcher in the course of the study.

Chapter V provides conclusions formulated from the research of the CRAG program and provides recommendations for program improvement. Additionally, all research questions are summarized and areas suggested for further study are identified.

II. BACKGROUND

A. PUBLIC TRUST AND THE CALL FOR REFORM

Prior to and throughout the 1980's, the defense industry was plagued by many well-publicized scandals and allegations of mismanagement that resulted in the fraudulent misuse of public funds and a degradation of the public trust with regard to defense procurement practices. A precursor to these events was an increase in the defense budget of 100% in 1972 dollars from 1972 until 1988, with the largest portion of that increase occurring during the years from 1981 - 1986 when the Government was building up the military. At that time, there was much public support for the military buildup, as depicted in Figure 1, with a majority of the populace agreeing that money was no object, as depicted in Figure 2.

The sheer size of the defense budget, even in 1986, was staggering. Annual purchases by DOD totaled more than \$170 billion, which made it the largest business enterprise in the world. The total number of contract actions approached 15 million annually, or 56,000 daily contract actions [Ref. 8:p. 3]. Additionally, these contract actions are spread over a prime contractor base in excess of 60,000, with a supporting structure of hundreds of thousands of other contractors and subcontractors [Ref. 9:p. 55]. In 1985, 70% of

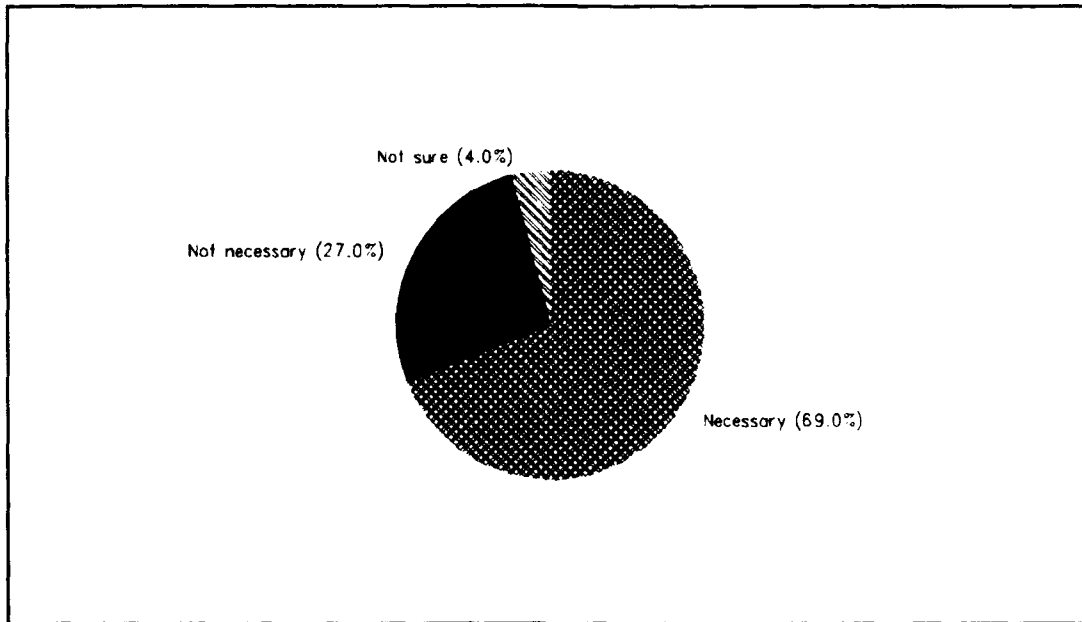


Figure 1: Necessity Of Military Buildup During The 1980's
(Source: Ref. 6:p. 21)

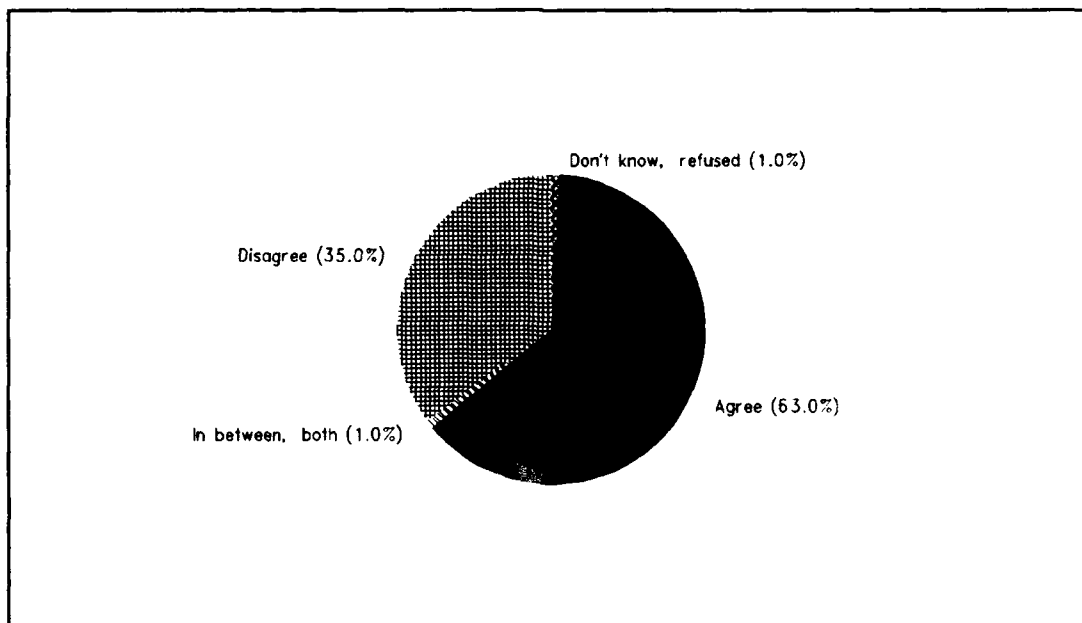


Figure 2: Spending Whatever Is Necessary For Defense
(Source: Ref. 7:p. 84)

the procurement actions went to a group of 100 contractors, 25 of them performing on more than \$1 billion in contracts each, 147 of them at more than \$100 million and about 6,000 contractors at \$1 million or more [Ref. 2:p. 1].

With the large number of contractors competing for the growing defense dollars, the potential for misuse and misrepresentation of public funds increased. Along with the build-up during the early to mid 1980's was an increase in the disclosures of waste and inefficiency [Ref. 10:p. 17]. As evidence of this misuse or misrepresentation the following is presented:

As of May, 1985, 131 separate investigations were pending against 45 of DOD's 100 largest contractors. These involved such issues as defective pricing, cost and labor mischarging, product substitution, subcontractor kickbacks and false claims. From June 1983 to April 1985, 12 separate investigations were instituted against one major contractor alone. [Ref. 2:p. 1]

"Public confidence in the effectiveness of the defense acquisition system has been shaken by a spate of 'horror stories'." [Ref. 8:p. 1] The horror stories contained in Table 1 represent some of the cost and pricing atrocities that were being discovered and were given front page coverage in the news media. While the media reported the cost discrepancy, they did not necessarily report the outcome of the investigation.

Eleanor Spector, Director of Defense Procurement summarized the media coverage as follows:

Acerbic journalists have informed us all the nation's scientists, engineers and manufacturers of especially high-technology products exploit that ignorance (of acquisition personnel) because they are gifted in larceny. Their talents run not to putting a man on the moon or devising an effective national defense, but to making outrageously priced toilet seats, stool caps and claw hammers. [Ref. 11:p. 30]

<u>You heard about the</u> \$400 Claw Hammer	<u>But did you hear that</u> DOD identified the overcharge and obtained a refund from the contractor
\$110 Diode	DOD identified the overcharge and obtained a refund from the contractor
\$9,000 Hex Wrench	DOD identified the overcharge and refused to pay
\$1,100 Plastic	DOD identified the Stool Cap overcharge, obtained a refund, and gave an \$1,100 award to the Air Force Sergeant who challenged the price.

(Source: Ref. 12, p. 248)

TABLE I: SPARE PARTS STORY

As a result of the publication of these incidents, the public perception of the management of the defense industry went into a tailspin. Not only did this perception of gross wrongdoings exist, it was also felt by 89% of the public that the problems were solvable. While it was unclear who was to blame for the debacle in defense spending, confidence was expressed that President Reagan, followed by national leaders

from outside Government, would find the means to reduce the waste and fraud in defense spending. [Ref. 13:p. 191]

B. EXECUTIVE ORDER 12526

On July 15, 1985, President Reagan signed Executive Order 12526 establishing the President's Blue Ribbon Commission on Defense Management. The commission consisted of 16 members who were appointed by the President. These members were people renowned within commerce and industry and people with extensive experience in Government and national defense. Mr. David Packard was chosen as the chairman.

The mission of the Blue Ribbon Commission was to study the management policies and procedures of the Department of Defense including the related activities of the Congress. The four broad areas under study were the budget process, the procurement system, legislative oversight and the organizational and operational arrangements of the DOD. Three of the eight specific directives given to the Commission included:

- Review the adequacy of the defense acquisition process, the adequacy of the defense industrial base, current law governing Federal and Department of Defense procurement activities, departmental directives and management procedures, and the execution of acquisition responsibilities within the Military Departments.
- Study and make recommendations concerning congressional oversight and investigative procedures relating to the Department of Defense.

- Recommend how to improve the effectiveness and stability of resources allocation for defense, including the legislative process. [Ref 14:p. 1-2]

The Panel was known as the Packard Commission (named after its chairman) and made recommendations on the procurement section on 31 December, 1985. Their final report was submitted on 30 June, 1986.

C. THE PACKARD COMMISSION

As incident after incident of waste in weapons procurement hit the news in the mid 1980's, it was "becoming clearer that there was something more than stupidity, wrong doing, and inefficiency involved in Pentagon procurement." [Ref. 15:p. 45] There was a consensus that procurement itself was at fault and that over-regulation, over-specification, over-planning and over-centralization, and over-coziness between program management and contractor personnel were the causes [Ref. 15:p.45].

In April, 1985, Representative William L. Dickinson (AL), the ranking Republican on the House Armed Services Committee, expressed his concern to President Reagan that the negative publicity that surrounded defense procurement was resulting in too many reactive, uncoordinated efforts at reform and was diminishing the public support of defense spending [Ref. 16:p. 21]. It was his contention that it was necessary to "consolidate piecemeal legislative attempts to correct Pentagon procurement abuses." [Ref. 17:p. 17] There was

growing concern that Congress was actually impeding true reform by mandating legislation that was 180 degrees away from what was considered professional purchasing practice [Ref. 18:p. 82].

It was the suggestion of Representative Dickinson and others to President Reagan that he establish a presidential blue ribbon panel on Government procurement reform [Ref. 17:p. 17]. In addition to the suggestion of his key advisors and the growing number of publicized defense scandals, President Reagan decided to create the commission because of his broad concern about the growing number and complexity of contract procedures and regulations that had accumulated over a 40 year period [Ref. 16:p. 20]. In addition to Mr. Packard, the Commission consisted of 15 other individuals who represented the business, legal and academic communities [Ref. 16:p. 20].

One of the major tasks of the Packard Commission was to ...evaluate the defense acquisition system, to determine how it might be improved, and to recommend changes that can lead to the acquisition of military equipment with equal or greater performance but at a lower cost and with less delay. [Ref. 8:p. 1]

As part of the evaluation, the Commission examined acquisition cases involving both major weapon system purchases and spare parts procurements and identified the following problems that occurred with frequency:

...government insistence on rigid custom specifications for products, despite the commercial availability of adequate alternative items costing much less; the ordering of spare parts so late in a program, after the close of the production line, that they must be expensively hand

tooled; the use of unsuitable cost allocation procedures that grossly distort the price tags of inexpensive spare parts; the buying of spare parts in uneconomically small quantities and hence at higher prices; and the simple exercise of poor judgment by acquisition personnel.

In general, we discovered, these problems were seldom the result of fraud or dishonesty. Rather they were symptomatic of other underlying problems that affect the entire acquisition system. [Ref. 8:p. 5]

As stated by William J. Perry, a member of the Packard Commission, a primary conclusion of the Commission was that

...defense acquisition was unacceptably inefficient....It is not the result of deviations from or abuses of the system, but instead is a direct consequence of the system itself. [Ref. 19:p. 80]

They further found that some cases

...involved violations of specific contractual and regulatory provisions. Many of these violations have resulted from management failure to establish internal controls to assure compliance with unique DOD requirements. Contractors historically relied on DOD auditors to identify instances where standards were not followed, and contractor failure to establish internal controls has developed in this regulated environment. [Ref. 7:p. 80]

In its final report, the Packard Commission concluded that

...self-governance is the most promising mechanism to foster improved contract compliance. It follows that each contractor must individually initiate, develop, implement, and enforce those elements of corporate governance that are critical to contract compliance, including a proper code of conduct. The extent of each contractor's efforts in doing so will reflect the level of reputation for integrity it intends to set for itself. [Ref 7:p. 84]

The recommendations to correct deficiencies in DOD procurement management addressed many functional areas from many differing perspectives. With regard to the development

and implementation of better internal control systems, the Commission made the following proposals:

- Establish internal auditing of compliance with Government contracting procedures, corporate standards of conduct and other requirements. Such auditing should review actual compliance as well as the effectiveness of internal control systems.
- Design systems of internal control to ensure that they cover, among other things, compliance with the contractor's standards of ethical business conduct.
- Establish internal audit staffs sufficient in numbers, professional background and training to the volume, nature and complexity of the company's government contracts business.
- Establish sufficient direct reporting channels from internal auditors to the independent audit committee of the contractor's board of directors to assure the independence and objectivity of the audit function....To encourage and preserve the vitality of such an internal auditing and reporting process, the DOD should develop appropriate guidelines heavily circumscribing the use of investigative subpoenas to compel disclosure of contractor internal auditing materials. [Ref. 20:p. 42-44]

D. THE DEFENSE INDUSTRY INITIATIVE

Concurrent with the work of the Packard Commission, a group of leading defense contractors met and formulated six principles regarding the proper conduct of business which became known as the Defense Industry Initiatives (DII) on Business Ethics and Conduct. One of the determinations made by the Packard Commission in its Interim Report to President Reagan was that corporate self-governance combined with internally enforced codes of ethics would facilitate the

appropriate conduct of defense contractors. Specifically the Interim Report stated

To assure that their houses are in order, defense contractors must promulgate and vigilantly enforce codes of ethics that address the unique problems and procedures incident to defense procurement. They must also develop and implement internal controls to monitor these codes of ethics and sensitive aspects of contract compliance. [Ref 21:p. 55]

In response to this sentiment, the DII promoted ethical business conduct by its signatories adopting and demonstrating policies and procedures in six areas:

- Codes of ethics;
- Ethics training;
- Internal reporting of alleged misconduct;
- Self-governance through the implementation of systems to monitor compliance with federal procurement laws and the adoption of procedures for voluntary disclosure of violations to the appropriate authorities;
- Responsibility to the industry;
- Accountability to the public. [Ref 22:p. 1]

The intent of this effort was to show that the defense industry was capable of governing itself in ethical matters, thereby regaining the public trust that had been placed in question. It was also an attempt to bolster the image of the defense industry in matters of contract compliance with Government rules and regulations. Only a minimal number of the total number of defense contractors have become signatories to the DII. By 1990, only 46 companies formally

adopted these principles, but they represented over 50% of DOD's annual procurement spending. [Ref. 23:p. 354]

While the DII has always been a program designed for large companies, its concepts apply to any Government contractor and should be tailored for implementation based on the company's size and nature and volume of Government business [Ref. 24:p. 57]. The policy of the DOD with regard to employment and implementation of contractor standards of conduct is similar to the precepts contained in the DII. It is the policy of the DOD that

Government contractors must conduct themselves with the highest degree of integrity and honesty. Contractors should have standards of conduct and internal control systems that:

- Are suitable to the size of the company and the extent of their involvement in Government contracting,
- Promote such standards,
- Facilitate timely discovery and disclosure of improper conduct in connection with Government contracts, and
- Ensure corrective measures are promptly instituted and carried out. [Ref. 25:Subpart 203.7000]

The procedures for implementing such a policy are found in the DOD Federal Acquisition Regulation Supplement (DFARS). These procedures state that

A contractor's system of management controls should provide for:

- A written code of business ethics and conduct and an ethics training program for all employees;
- Periodic reviews of company business practices, procedures, policies, and internal controls for compliance

with standards of conduct and the special requirements of Government contracting;

- A mechanism, such as a hotline, by which employees may report suspected instances of improper conduct, and instructions that encourage employees to make such reports;
- Internal and/or external audits, as appropriate;
- Disciplinary action for improper conduct;
- Timely reporting to appropriate Government officials of any suspected or possible violation of law in connection with Government contracts or any other irregularities in connection with such contracts; and
- Full cooperation with any Government agencies responsible for either investigation or corrective actions.
[Ref. 25:Subpart 203.7001]

E. THE CRAG STEERING GROUP

During 1988, individuals representing the various elements of the DOD formed a steering group to formulate a plan to implement the recommendation of the Packard Commission that contractors should develop strong internal control systems. Members of this group included Eleanor Spector, Deputy Assistant Secretary of Defense (Procurement); June Gibbs Brown, DODIG; and William H. Reed, Director, DCAA. The product of their efforts was the CRAG which provided the framework for the defense industry to demonstrate to the Government that internal controls were in place, operational and functioning as intended [Ref. 3:p. i]. Prior to the issuance of the final version of the CRAG, industry's comments

and suggestions were solicited and reviewed for inclusion in the program [Ref. 26:p. 72].

The CRAG includes "a series of controls aimed at ensuring that indirect cost claims, proposals and billings applicable to U. S. Government contracts are prepared and submitted in accordance with federal laws and regulations." [Ref. 27:p. 87] The CRAG program was developed as follows:

- High risk areas for Government contracting were identified.
- Overall control objectives and major controls were developed for each high-risk area that was identified.
- A list of commonly used control procedures was developed for each major control. [Ref. 3:p. 1]

The high risk areas identified were indirect cost submissions, labor charging, material management and accounting systems, estimating systems and purchasing.

The CRAG was developed to help prevent an adversarial relationship between the defense industry and DOD, assist contractors in the pursuit of efficiency and improved quality and make DOD oversight resources available for other uses [Ref. 28:p. 141]. The benefits originally envisioned through implementation of the CRAG included:

1. For industry:

- Strengthened internal control systems related to contractual adherence to Federal procurement regulations.
- Enhance [the company's public] image.
- Reduced incidence of civil and criminal prosecutions and attendant fines and penalties.

- Better understanding of DOD oversight objectives and review criteria used to assure contractor adherence to Federal procurement regulations.
 - Favorable consideration in debarment proceedings.
 - Reduced Government oversight, with emphasis on elimination of duplicative oversight wherever reliance can be placed on work performed by the contractor.
2. For Government:
- Improved efficiency and effectiveness of oversight operations.
 - Greater reliance on contractor internal control systems in establishing the scope of Government oversight.
 - Focused oversight activity on areas where ineffective controls exist.
3. For both Government and industry:
- Better communications and working relationship between the DOD and industry.
 - Improved credibility of the DOD contracting process in the eyes of the Congress and the public. [Ref. 3:p.2]

While these were the expected benefits, there existed an attitude by contractors that different divisions of DOD had given them varying guidance regarding procurement policy [Ref. 26:p. 72]. Because of that feeling, there were many reservations about an inconsistent application of the CRAG program from contractor to contractor [Ref. 27:p. 87]. These reservations surfaced even though it had been advertised to the contractors that this was an internally coordinated DOD effort where all DOD agencies were involved [Ref. 28:p. 72].

While the program was conceptually sound, cultural changes were required by both industry and Government for the program

to succeed. Voluntary participation by contractors was incentivized by the possibility of reduced oversight. The CRAG was not warmly received at its inception as only a handful of contractors had agreed to participate by the end of April, 1989. [Ref. 29:p. 87]

F. THE DEFENSE MANAGEMENT REPORT (DMR)

In February, 1989, President Bush tasked Secretary of Defense Dick Cheney in National Security Review Directive 11 to develop a plan for fully implementing the recommendations of the Packard Commission and the Goldwater-Nichols Defense Reorganization Act [Ref. 1:p. 166]. The result was the Report to the President on Defense Management which was presented in July, 1989. "The DMR was not meant to be a revolutionary approach to the business of defense acquisition." [Ref. 30:p. 55] The report merely "...established a broad agenda to accomplish full implementation of the recommendations [of the Packard Commission] and to realize substantial savings overall." [Ref. 31:p. 14] Additionally, the DMR provided a plan for substantially improving the performance of the defense acquisition system and more effective management of the DoD and its resources [Ref. 32:p. 8].

Among other things, the DMR identified requirements to

- Reduce significantly the number of programs that overrun their budgets, are late, or technically deficient;
- Establish and enforce high ethical standards of conduct in DOD and the defense industry;

- Reduce micromanagement and simplify the laws and regulations governing DOD;
- Reverse the decline in the industrial base; and
- Improve relations among Congress, DOD, and the defense industry. [Ref. 31:p. 14]

The report stated Secretary Cheney's support for the DOD self-governance program and his view that the program be adopted by the defense contractors voluntarily [Ref. 1:p. 170]. He recommended that contractor self-governance, where industry management assumes new responsibilities for the oversight of their contract operations, be greatly improved and that the DOD exercise its management and oversight responsibilities more effectively [Ref. 33:p. 11]. His report stated that contractor self-governance, when supported by law enforcement, "is the most promising additional mechanism to foster compliance with the high standards expected of DOD suppliers". [Ref. 34:p. 19]

The DMR supports expanded participation in the CRAG program as a way of improving the effectiveness and efficiency of Government oversight through contractor self-governance [Ref. 1:p. 170]. One should realize, however, that "self-governance programs do not replace Government oversight." [Ref. 34:p. 19] Self-governance programs, such as CRAG, "encourage DOD contractors to develop more effective internal control systems and thereby reduce the burden on the Government to provide external oversight." [Ref. 35:p. 10]

G. SELF-GOVERNANCE AND INTERNAL CONTROLS

Contractor self-governance and internal controls are two areas that were addressed by the Packard Commission and that required improvement. They said:

Contractors will be required to do much more than they have done in the past to comply with contractual, regulatory, and statutory standards and to provide adequate supervision and instruction for employees. To do so will necessitate their putting in place broad and effective systems of internal control. [Ref. 7:p. 80]

"Government contractors should have the necessary systems and controls to satisfy regulatory compliance requirements and police their own activities." [Ref. 24:p. 57] "Free choice of governance ... is considered to be important, and regulating to impose standard forms of governance is viewed as unnecessary and potentially harmful." [Ref. 36:p. 113] It was the feeling of the Packard Commission that "Government actions should foster contractor self-governance." [Ref. 7:p. xxix] Additionally, "Government action should not impede efforts by contractors to improve their own performance. The (Packard) Commission is concerned that, for example, overzealous use of investigative subpoenas by Defense Department agencies may result in less vigorous internal corporate auditing." [Ref. 7:p. xxvii] To emphasize the importance of self-governance, the Packard Commission stated that

Excellence in defense management can not be achieved by the numerous management layers, large staffs and countless regulations in place today....Excellence in defense management will not be achieved through legions of

Government auditors, inspectors and investigators. It depends on the honest partnership of thousands of responsible contractors and DOD, each equally committed to proper control of its own operations. [Ref 7:p. xiii]

Figure 3 shows the five key components and their inter-relationships of a typical Government contract compliance and self-governance program. One of the key components of this

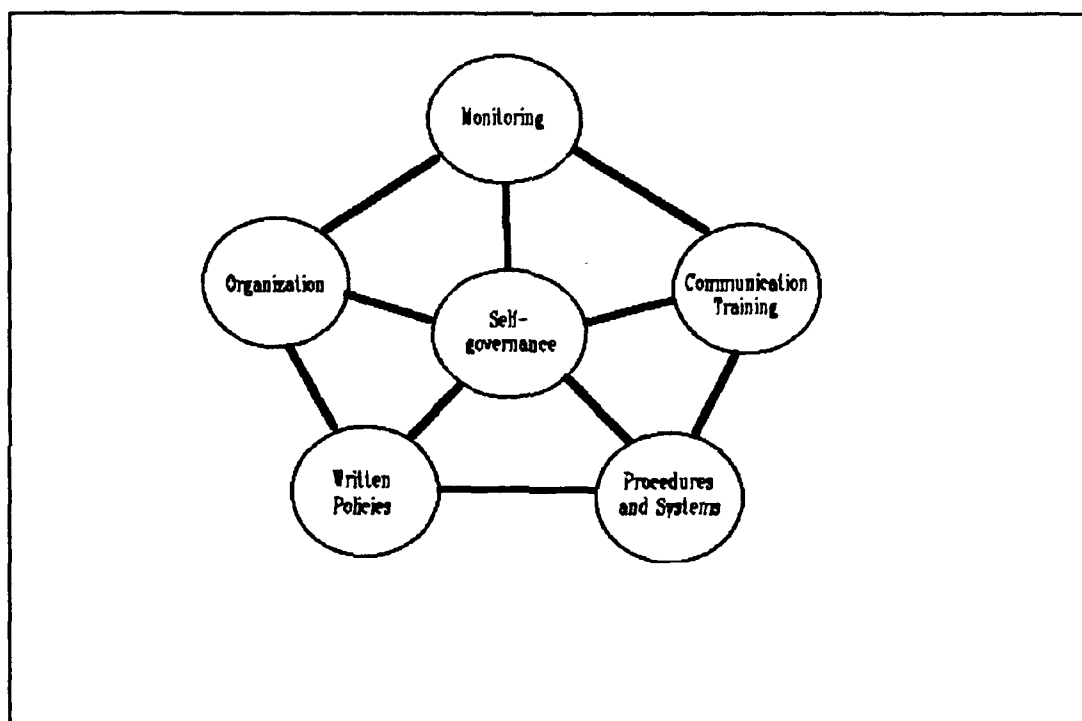


Figure 3: Self-Governance Program -- Integrated System Approach

(Source: Ref 24:p. 60)

model is the monitoring function which may consist of several different disciplines. [Ref. 24:p. 60]

The timing of this monitoring or oversight is important. It has been stated that

...compliance monitoring is most effective if done on a real-time basis. Therefore, supervisory and operational reviews and controls must be part of any self-governance

program. Operational oversight is a day-to-day activity intended to ensure company employees are aware of, understand and follow company policies and procedures. If a company has an internal audit function, it should have a major role in monitoring compliance as part of its normal audit process. [Ref. 24:p. 60]

Of course, internal audit is only one aspect of self-governance. There exist many other elements to self-governance programs.

The Committee of Sponsoring Organizations of the Treadway Commission (COSO) defined internal control as

...a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in each of the following categories:

- Effectiveness and efficiency of operations.
- Reliability of financial reporting.
- Compliance with applicable laws and regulations.
[Ref. 37:p. 30]

While these are the broad categories of objectives of internal control systems, COSO also identified five components that comprise internal controls. The five components including some of their factors are as follows:

- Control Environment - The core of any business is its people - their individual attributes, including integrity, ethical values and competence - and the environment in which they operate.
- Risk Assessment - The entity must be aware of and deal with the risks it faces. It must set objectives integrated with the sales, production, marketing, financial and other activities of the organization is operating in concert. It also must establish mechanisms to identify, analyze and manage the related risks.
- Control Activities - Control policies and procedures must be established and executed to help ensure the actions

identified by management as necessary to address risks to achieve the entity's objectives are carried out effectively.

- Information and Communications - Surrounding these activities are various information and communication systems. These enable the entity's people to capture and exchange the information needed to conduct, manage and control its operations.
- Monitoring - The entire process must be monitored, with modifications made as necessary. In this way, the system can react dynamically, changing as conditions warrant. [Ref. 37:p. 31]

In summary the objectives delineate what a corporation strives to achieve and the components delineate what is needed for achievement of the objectives. To determine whether or not an internal control system is effective, a subjective evaluation must be conducted to assess if the five components are present and functioning properly. [Ref. 37:p. 30-31]

H. THE CRAG PROGRAM

The CRAG was implemented in November, 1988, as a voluntary program with the intent of improving DOD's oversight of contractors and to foster the concept of contractor self-governance through stronger contractor internal control systems [Ref. 34:p. 20]. "Contractors who can demonstrate implementation of internal control systems that meet acceptable objectives are to be considered for reduced oversight." [Ref. 28:p. 141]

Through development of the CRAG, DOD has attempted to answer the following questions and maintain a proactive role

in streamlining the oversight function of Government purchasing:

- What are fair and equitable oversight levels?
- Is oversight under control?
- What are fair oversight criteria?
- Can contractor self-governance affect oversight? [Ref. 4:p. 15]

While the contractor makes the decision on which chapters of the CRAG that he desires to participate in, the Government retains the decision on the appropriate amount of oversight for the selected functional areas, depending on the acceptability of the contractor's program.

As stated in Chapter 1, there are five areas of the procurement field that are included as chapters of the CRAG program: Indirect Cost Submission, Labor Charging, Material Management and Accounting Systems, Estimating Systems and Purchasing. Each chapter of the CRAG has its own control objective. Requirements for major controls in support of each control objective are also delineated to ensure that the contractor's internal control systems encompass all the requirements of the individual high-risk areas. The objectives and major controls for each chapter of the CRAG are included as Appendix B to this study.

Of course, participation in the CRAG doesn't just happen. Both the contractor and the Government have responsibilities

that have to be satisfied in order for the program to work.

Contractors desiring participation in the CRAG program shall

- Notify the Administrative Contracting Officer (ACO) of the risk areas in which the contractor plans to participate in the CRAG program.
- Describe and document the policies, procedures and controls that define the system addressing the contractor risk area(s).
- Describe and document the program for training employees (where appropriate) in these procedures and policies.
- Describe and document the mechanism(s) utilized to monitor and test the system.
- Demonstrate, in a manner mutually agreed to with the ACO and cognizant DOD oversight activity, that the system is functioning as described.
- Maintain continuing surveillance over the internal control system to assure that the CRAG objectives are being met.
[Ref. 38:p. iii]

The responsibilities of the ACO include these:

- Arrange for the contractor to meet the appropriate DOD oversight official.
- Advise off-site DOD oversight activities of the existence and status of the CRAG program.
- Help prevent duplicative and overlapping oversight.
- Work with the appropriate oversight official to ensure that oversight levels are commensurate with the quality and reliability of a contractor's internal control systems. [Ref. 4:p. 16]

The appropriate DOD oversight activity or official will

- Establish with the contractor a coordination process for ensuring that the DOD is aware fully of the contractor's plans and accomplishments.
- Integrate the effect of the contractor's efforts into planned oversight activities.

- Inform the contractor and the ACO, through periodic meetings, of the extent to which contractor activities have influenced the scope of DOD oversight. [Ref. 38:p. iv]

In addition to these responsibilities, in order for the CRAG program to be successful, there must be a commitment on the part of both corporate management and Government authorities and an active implementation of the program at the operating level [Ref. 34:p. 19].

I. SUMMARY

Scandals and fraud within the defense community and Government procurement during the early 1980's were responsible for numerous calls for reform by the public, the legislature and the Administration. This public outcry resulted in the formulation of the Packard Commission, which made recommendations for better management of the DoD, the birth of the DII, which was industry's plan for practicing and promoting a higher standard of business ethics, and the DMR, which reported on the progress of the DoD's implementation of the recommendations of the Packard Commission.

One outgrowth of these events was the initiation of the CRAG program. Since its implementation, the guiding principles of the CRAG to promote contractor self-governance have not changed. Additionally, the five high-risk areas included as chapters in the CRAG have not changed nor have any other risk areas been added to expand the program's coverage.

The next chapter will address the views of the defense contractors about the CRAG because of their experience with it and attempt to determine the level of support for continuing the program as it is, make changes to it or completely cancel it.

III. DEFENSE INDUSTRY OPINIONS AND ANALYSIS

A. OVERVIEW

From its inception in 1988, participation in the CRAG program by the defense industry has been minimal. When the program first began, only six companies were participants. Because of increased emphasis and promotion of the program by the Defense Contract Management Command (DCMC), the number of participants more than doubled to 13 by May of 1990 [Ref. 38 and Ref. 39:p. 701]. The number of companies and divisions participating in CRAG continued to grow and, by May 31, 1991, there were 93 participants [Ref. 34:p. 10].

Defense industry professional organizations such as the Institute of Internal Auditors, CODSIA and the Aerospace Industry Association are proactive in supporting many of the initiatives that encourage self-governance and promote its concepts. An example is Coordinated Audit Planning, whereby the contractors and the Government work together to formulate audit plans. As recently as March of 1993, a workshop was conducted where industry and Government representatives shared their lessons learned with regard to audit planning, which included CRAG implementation and experiences.

In an effort to determine the opinions of industry about the CRAG program, including its benefits, its problems and

modification/cancellation recommendations, a questionnaire was sent to 150 defense contractors representing the top 100 defense contractors in 1990 and suppliers to the Navy Aviation Supply Office. The questionnaire is included as Appendix C. Of the 150 questionnaires mailed, 63 were returned, representing a 42% return rate. The results are included herewith.

B. SURVEY QUESTIONS²

1. Question #2, Familiarity With CRAG:

Are you familiar with the CRAG program and its benefits? If familiar what are the top three benefits?

a. Graphical Presentation of Responses³:

Figure 4 represents responses to question 2.

b. Contractor Comments:

Comments from the contractors varied with regard to their level of familiarity with the CRAG program.

When considering the benefits of the CRAG program, responses varied across the spectrum from completely positive to completely negative. The most positive responses include improved communications between contractor and Government

²Question #1 requested the name of the company, name of the person completing the questionnaire and other data that are not included in this thesis.

³All graphs include the response category, the number of responses in that category and the percentage represented by each response category.

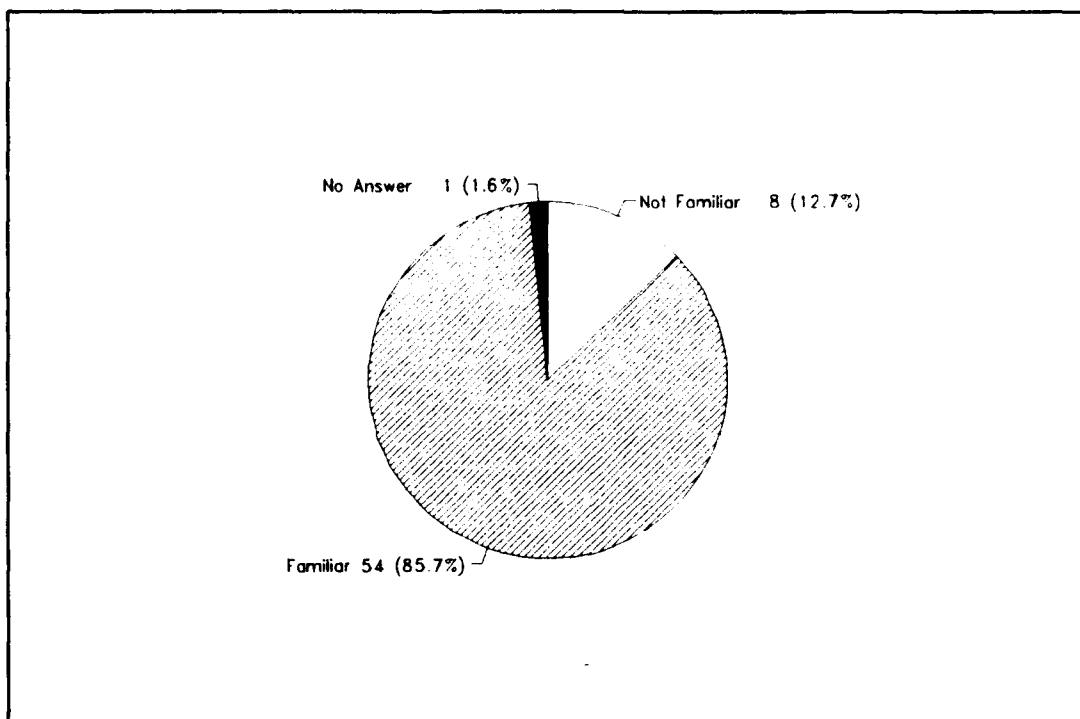


Figure 4: Familiarity With CRAG

personnel, better working relationships between the parties, improved internal control systems, reduced levels of oversight and a reduction in the amount of duplicative audits.

The more negative responses include the feeling that benefits are minimal because the contractors, although they have internal controls in place, cannot satisfy the requirements of oversight activities because of a high turnover of Government personnel, each with his own interpretation of the program. Another negative comment was that there were no benefits because of the resources and time required to establish and maintain the systems.

c. Analysis:

The researcher expected to see a high level of contractor familiarity with the CRAG because of the heavy promotion the program received during the first two years after its implementation as shown in the literature research. With 85% of the respondents acknowledging familiarity with the program, the researcher feels that the CRAG has been adequately publicized as being available for contractor consideration in the formulation of business and audit plans.

Based upon the data received from industry respondents, the three most prevalent benefits, listed in order by highest number of responses, were better communications (35), better working relationships (34), and improved internal control systems (28). Because reduced Government oversight is a primary goal of the CRAG program, it was anticipated that reduced oversight would be reported as one of the top three benefits perceived by the respondents. However, only 20 responses reported that this aspect of the CRAG was a top benefit. This indicates to the researcher that the contractors perceive the CRAG as more of a management tool rather than a means to do away with Government auditors.

2. Questions #3 and #3A, Application for Participation:

Has your company applied for participation in the CRAG program in the past? If not, why not?

a. Graphical Presentation of Responses:

Figure 5 represents responses to question 3.

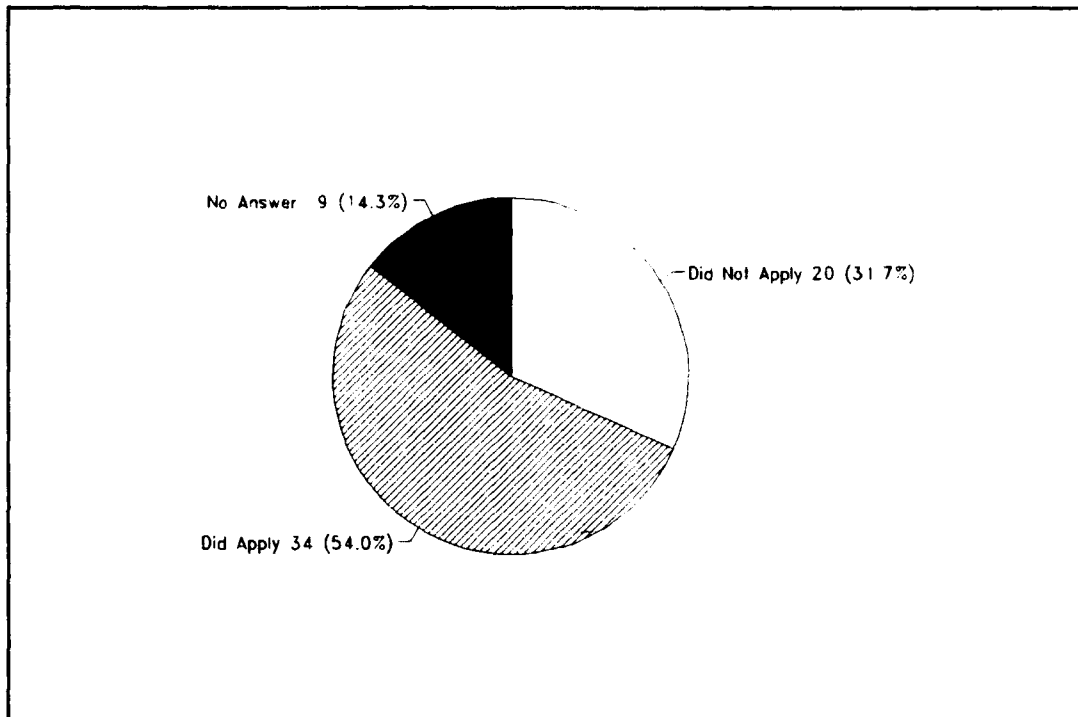


Figure 5: Respondents' Application For CRAG Participation

b. Contractor Comments:

Specifically addressing the choice not to participate in the CRAG program, respondents commented that the costs of implementing control systems outweigh the benefits of participation in the program in the near term. Additionally, some contractors were of the opinion that there was no benefit to participation in the CRAG program; that reductions in pre-award reviews translate into increased post-award reviews or surveillance surveys. They also expressed the opinion that the Government would not reduce the nature and extent of oversight.

Additional comments were received that some non-participants were awaiting proof of reduced oversight at other companies who were already participating in the program. They were content to remain on the sidelines until the CRAG is proven.

c. Analysis:

Fifty four percent of the respondents applied for participation in the CRAG program while 32% specifically chose not to participate.

The 32% who declined to participate in the program did so because of a number of reasons that point to a fundamental lack of trust that the Government would actually reduce the amount of oversight. The basis for this lack of trust was that these contractors felt oversight would not be reduced, only shifted to other areas. This is not a valid basis for non-participation because one of the premises of the program states that oversight may be shifted or reduced. This concept is a "given" in the CRAG guide, and not an unintended negative side-effect.

Eleven of the twenty contractors who chose not to participate in the program also expressed as a reason not to apply for CRAG that the Government personnel performing audit and review tasks such as the 3-year Contractor Purchasing Systems Review (CPSR) would continue to be guided by laws and regulations with no acknowledgment accorded to CRAG

participation. While a valid concern, only participation in the program would have proven them right.

Another category of response that surfaced that was a surprise to the researcher was that, because they already had internal control systems in place and operating, some contractors felt they already complied with the intent of the CRAG without getting formally involved. The reasoning behind this frame of thought is that to formally participate, additional resources would have to be expended to refine current systems that would decrease the corporate or division "bottom line". In the judgment of the researcher, these companies would derive an excess of benefits over any additional costs, in the long run, through formal participation in the CRAG.

3. Question #3B, Future Application for Participation:

If your company has not applied for participation in the past, do you foresee the possibility of applying for participation in the future?

a. Graphical Presentation of Responses:

Figure 6 represents responses to question 3B.

b. Analysis:

One of the reasons that some companies are not participating at present is their preference to await the results of current participants' success or failure at achieving reduced oversight. Once the objectives of the CRAG

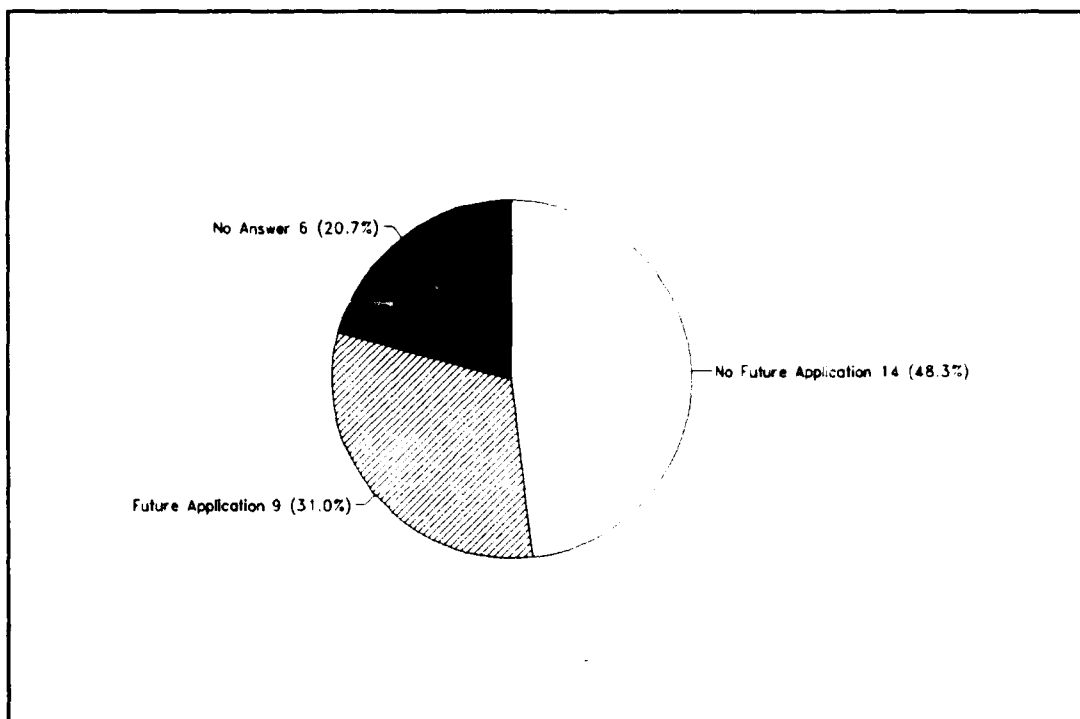


Figure 6: Non-participating Respondents Potential For Future Application In CRAG

program are proved or disproved, additional movement in or out of the program may follow. Realizing that it has been five years since the inception of the CRAG, contractors report that they have seen no published results directly identifying benefits as a direct result of other companies' participation in the program. Although results are discussed at some trade association meetings, no reports of success have been publicized. The researcher's review of the literature supports these comments.

For those who continue to opt not to participate in the program, it is believed by the researcher, because of input received through personal and phone interviews, that individual companies' current levels of personnel, finance and

accounting system resources will continue to constrain them from undertaking this effort. Given the current downsizing of the DoD, a few of them are in a "holding" pattern as to the allocation of their resources for programs such as this.

For these two observations, the researcher cannot envision any easy resolution that would make a contractor reconsider his opinions.

4. Question #3C, Planned Expansion or Reduction in CRAG:

If your company has applied for the CRAG program, does it plan on requesting further expansion or a reduction in its participation in the program?

a. Graphical Presentation of Responses:

Figure 7 represents responses to question 3C.

b. Contractor Comments:

Several contractors have only instituted implementation of one or two chapters of the CRAG. Many of them are analyzing the results of their partial participation to date and will make decisions to expand participation based on that analysis. Others have expressed that their option to expand participation in the CRAG is contingent on the results of other companies' successes or failures in selected chapters of the CRAG.

c. Analysis:

Of the 34 respondents who reported participation in the CRAG, 53% are full participants, 35% are partial

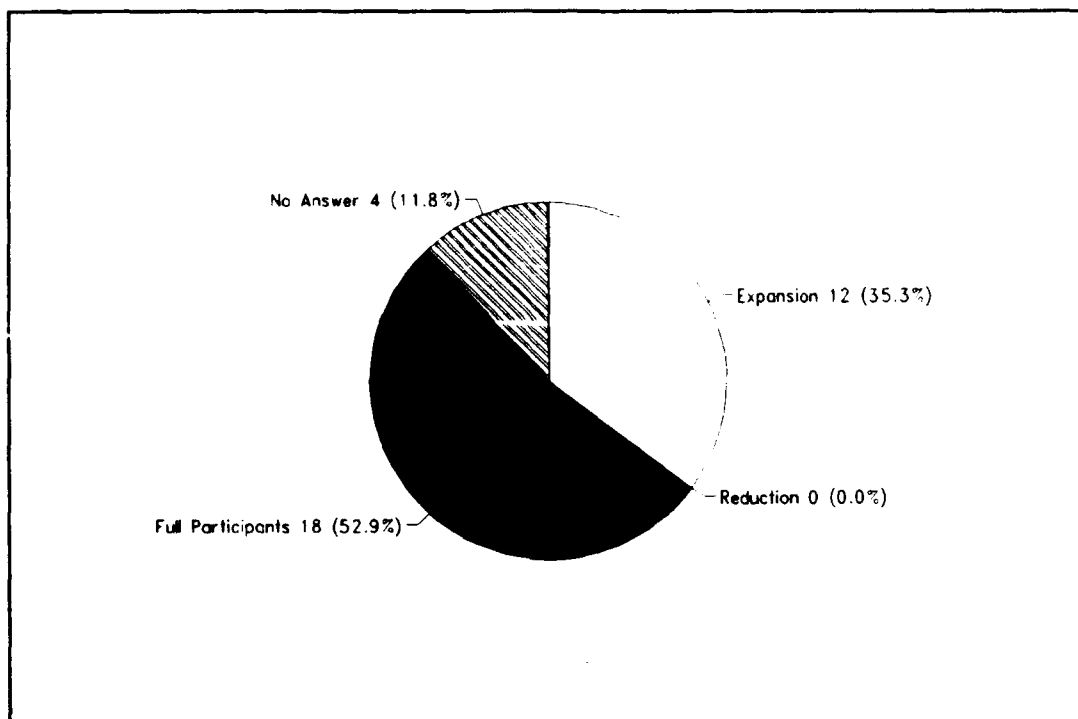


Figure 7: CRAG Participants' Planned Expansion/Reduction In The Program

participants and 12% declined to answer. The 35% who have expressed an interest in expanding their participation in the program only need further proof that the CRAG program is beneficial prior to implementation of other chapters. The two areas of proof indicated by these respondents as determining factors in their expansion are published results of other participants involved in CRAG chapters over and above their own participation and, because many have only minor practical experience with limited participation, quantifiable results of their own participation.

An interesting fact is that, of all the respondents who participate in the CRAG, not one of them indicated that they were considering a reduction in program participation.

It was expected that not all participants would be sufficiently satisfied with the CRAG to remain part of the program. This indicates to the researcher two alternatives, one being that the respondents are satisfied with CRAG progress toward achieving their corporate goals and the other being that for some contractors an insufficient amount of data are available for an analysis that may have negative results.

5. Question #4, Adequacy of Qualification Description:

Does your company consider the CRAG to be adequate in its description of the qualifications necessary to participate in the program?

a. Graphical Presentation of Responses:

Figure 8 represents responses to question 4.

b. Contractor Comments:

Many of the respondents who answered that the descriptions of the CRAG requirements were adequate offered no additional input. However, a few of the respondents commented that the requirements were very broad and covered the concepts in general terms only. Additionally, three of the respondents stated that, while the requirements were adequate, they were open to interpretation by the individual Government oversight official and that some of the officials required additional training on the CRAG.

For those who answered negatively on this question, again, many of them also offered no additional input.

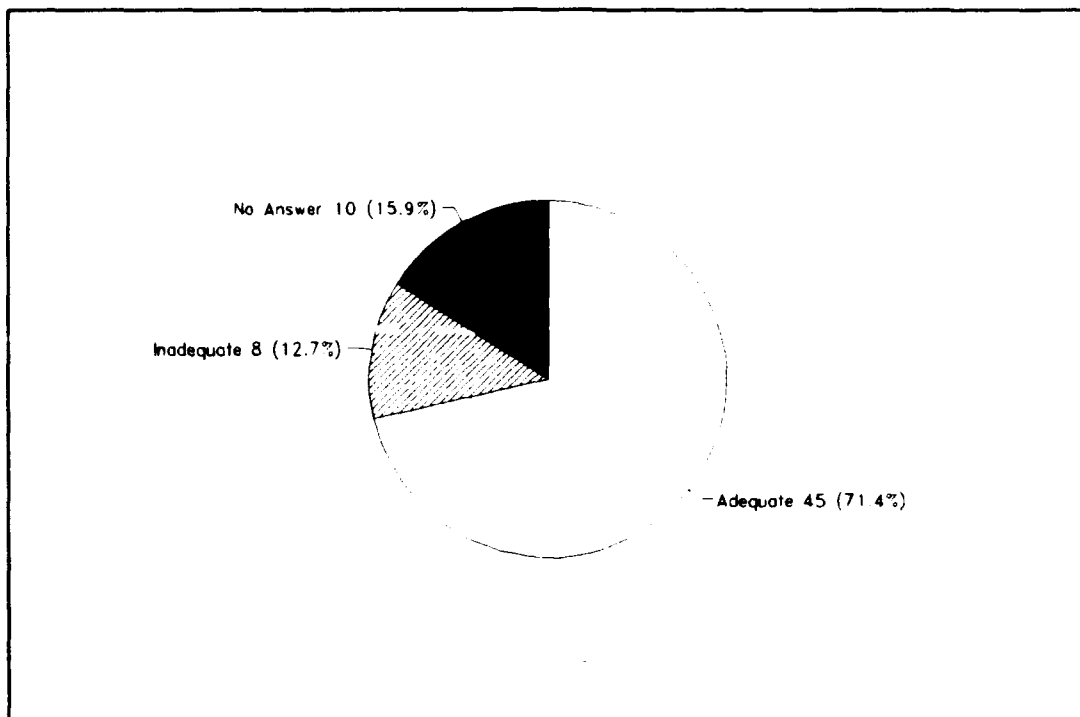


Figure 8: Adequacy Of Description Of CRAG Qualifications For Participation

However, one of them relayed that in his opinion the requirements were not specific enough.

c. Analysis:

The CRAG program delineates the requirements for contractor participation in each of the five high-risk areas. While opinions vary on the adequacy of the CRAG program requirements, clearly a majority of the respondents consider them appropriate. The CRAG program is based on the premise that control objectives and major controls are defined, but that company policies for internal controls will not be dictated by the Government. Although not specifically stated in responses to the survey questions, follow-up phone

interviews with some respondents indicated that the requirements enhance the concept of an "arm's length relationship" between Government and industry while promoting a cooperative atmosphere. They stated that they agree that internal control systems should not be standardized because the different structures and complexities of corporations need to be considered when evaluating participation by contract area.

It was the judgment of the researcher, due to preliminary research in the selection of a thesis topic, that companies didn't fully understand the requirements of the program. However, the research showed that, in the majority of the cases, the requirements were understood.

6. Question #5, Areas of Contractor Participation in CRAG:

Which of the five areas currently delineated in the CRAG program does your company participate in?

a. Graphical Presentation of Responses:

Figure 9 represents responses to question 5.

b. Analysis:

The distribution of companies participating in each area shows that there is a fairly even level of participation throughout the program. The only apparent exception in the distribution is the lesser number of companies participating in MMAS relative to the total number of companies

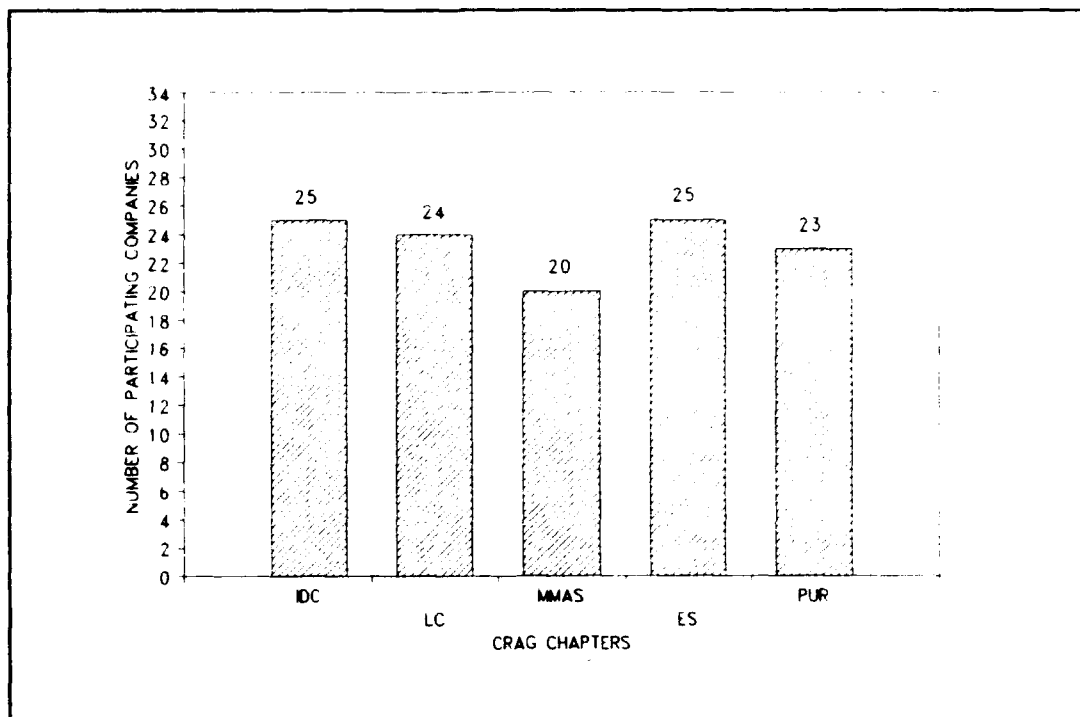


Figure 9: Number of Respondents Participating In CRAG By Chapter

participating in the other four areas included in the CRAG. This can be attributed to the rigid requirements of the MMAS as delineated in the DFARS, which mandates that the contractor must achieve high levels of accuracy (95 - 98%) in the areas of bills of materials, master production schedule and physical inventory levels. This may be difficult to achieve because of the frequently changing environment of the defense contractors, whereby requirements fluctuate as the Government directs production acceleration or stretch-out [Ref. 40:p. 52].

It was anticipated by the researcher that a higher number of current participants in the CRAG would have been involved in the Purchasing Chapter. The reasoning behind this

expectation was that because the CPSR is held every 3 years, with some qualifying companies having interim reviews, in accordance with the FAR, transition to CRAG participation might have been relatively simple and would have resulted in benefits to the participant. However, this expected trend was not evident in the research.

7. Question #6, Implementation Difficulty:

Did your company experience any difficulties with implementation of any portion of the CRAG?

a. Graphical Presentation of Responses:

Figure 10 represents responses to question 6.

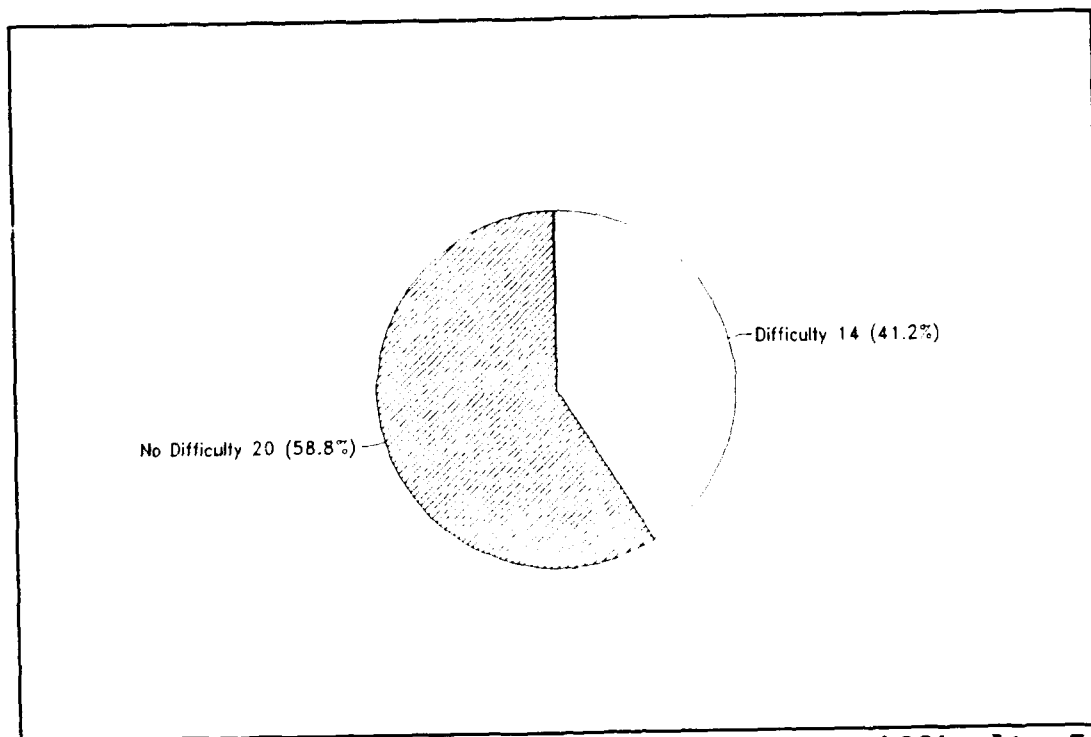


Figure 10: CRAG Participants Experiencing Difficulty In Implementation

b. Contractor Comments:

Lack of commitment and effort by DCAA personnel were stated in the responses of some contractors as impediments to implementation because they were of the opinion that the DCAA personnel were fearful of job loss. Also, they reported that there is no formal implementation guide for CRAG participation. The only direction given is that the contractor needs to contact the ACO about his desires and the ACO will then coordinate the effort. It is at this point that the contractors felt a lack of training existed.

Those who didn't experience difficulty in implementation said that they participated with the Government personnel in the formulation of an overall plan to institute CRAG chapters, thereby avoiding problems.

c. Analysis:

In order for implementation of participation in the CRAG to occur without difficulty, all parties must jointly formulate a strategy that lays out in detail the requirements and expectations of all concerned. Both Government and contractor personnel should make up-front agreements on what is expected and how those expectations will be achieved. Included in this strategic plan should be key target dates for review of progress and identification of milestones leading up to acceptance of the contractor's internal control system.

Cooperation and communication are paramount in ensuring a smooth transition into CRAG participation.

Reports of differences in interpretation of CRAG guidelines and proposed internal control systems to meet those guidelines were barriers to a smooth implementation process. Additional training emphasizing a uniform interpretation of the guidelines may alleviate this problem in the future. While a difference in interpretation was the reason behind the difficulty in the implementation of CRAG in ten of the fourteen cases, further communication and cooperation on the part of all parties led to successful implementation. Again, it shows that a good working relationship is paramount in the success of the CRAG program.

8. Question #7, CRAG Chapters Not Chosen for Participation:

Are there any areas of the CRAG that your company chose not to participate in?

a. Graphical Presentation of Responses:

Figure 11 represents responses to question 7.

b. Contractor Comments:

Some participating contractors report that they choose not to undertake particular chapters of the CRAG because they see no major benefits in those particular chapters. For example, in MMAS, one contractor stated that, since he is already having to demonstrate compliance with the

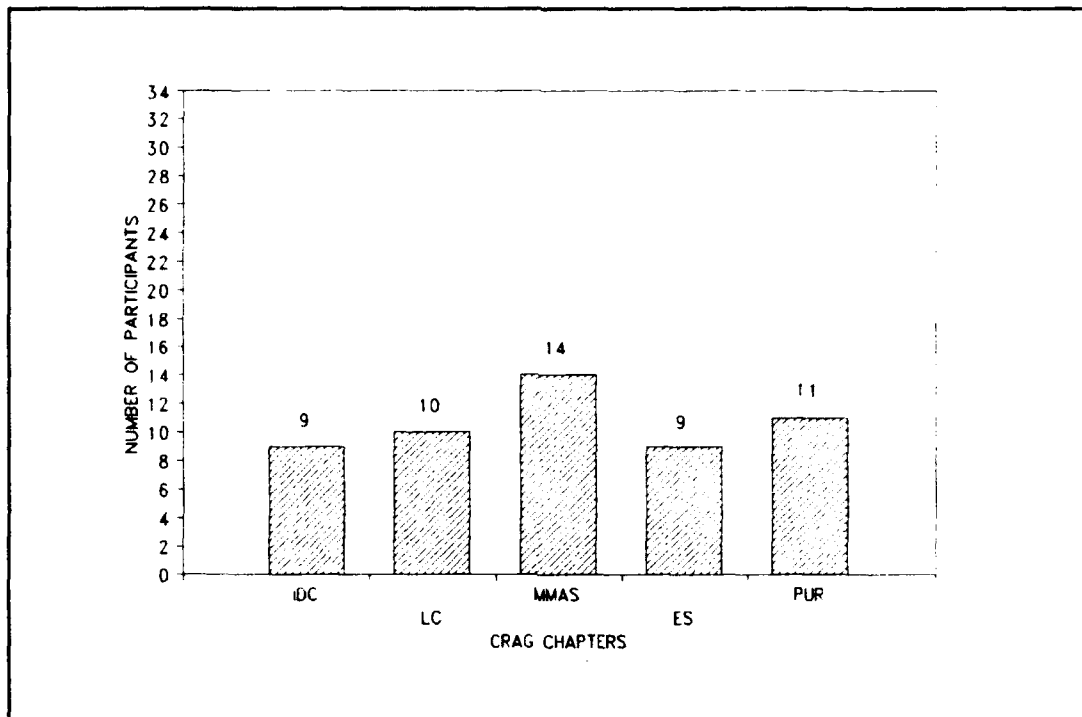


Figure 11: Distribution Of CRAG Participants, By Chapter, Who Declined Participation In Select Areas

ten key elements, he is already a participant without having to officially sign up for that chapter of CRAG. Others stated that they chose not to participate in some chapters because they wanted to test the program by initiating implementation of only one or two chapters to judge the benefits of the CRAG prior to complete participation. Additionally, the comment was made that in the areas of MMAS and IDC, no one directly involved with a particular company understood the criteria.

c. Analysis:

The respondents seemed hesitant to participate in CRAG chapters because of a belief that oversight in those areas may not be reduced. With regard to misunderstanding the

criteria for each chapter, perhaps further training is required or a refinement of the guidelines might be necessary.

The existence of requirements for programs such as CPSRs and MMAS reviews, as delineated in the FAR and DFARS, in the mind of the researcher, should have presented an easy bridge for participation in the CRAG since the contractors already comply with those requirements. However, because of the requirements, contractors not participating in those two particular chapters felt that they would be subjecting themselves to additional work because the oversight activities had to perform those reviews without regard to CRAG participation. It had been an expectation that these two areas would have had more participation for reasons given in paragraph 5 (c) of this section.

9. Question #8, Reduction In Oversight:

Is your company experiencing any reduction in the amount or level of Government oversight because of your participation in the CRAG program?

a. Graphical Presentation of Responses:

Figure 12 represents responses to question 8.

b. Contractor Comments:

Many contractors who experienced a reduction in the amount of oversight claim that they are receiving fewer DCAA audits or reduced audit scope. Others have reported reduced DCAA headcounts in their plants. Since the implementation of

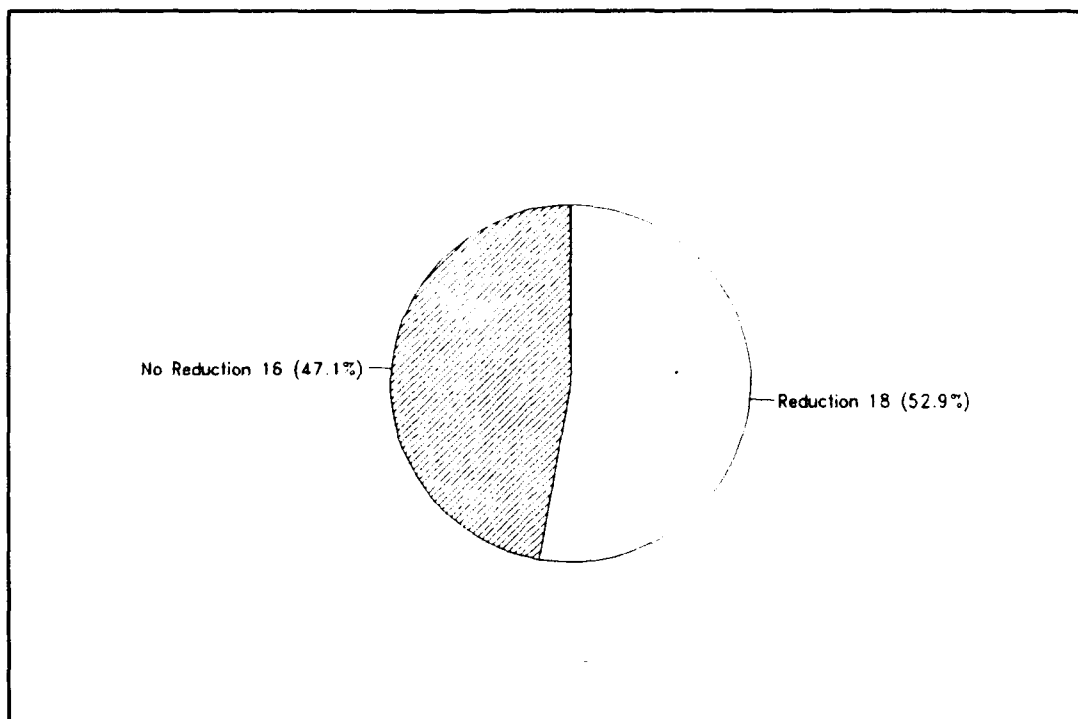


Figure 12: CRAG Participants Experiencing Reduced Oversight

CRAG at their activities, one firm reported a decrease of DCAA auditors from 14 to 10; another reported a decrease from 59 to 50; and one other reported a decrease from 139 in 1989 to only 84 by the end of 1992. It was also expressed that the reductions in oversight are a result of increased communication and coordination between Government and industry personnel.

For those who experienced no reduction in oversight, some of them commented that their implementation was too recent and that not enough data were available to make a determination. Others stated that although they are participants and their internal control systems have been approved for CRAG, the Government oversight activities

disregard the contractor's results and continue to perform full transaction analysis and program reviews.

c. Analysis:

Of the 34 companies reporting participation in the CRAG program, only 53% report reduced oversight. A review of the literature and the stated intent of the CRAG led the researcher to believe that the percentage of participants receiving a reduction in Government oversight should have been higher. To achieve a higher rate of reduction, it is the judgment of the researcher that more experience with the CRAG program is required with some companies to quantify the level of oversight encountered. Eight of the sixteen respondents reporting no reduction indicated that there was insufficient data available because their implementation was too recent.

Additionally, as more cooperative and trusting relationships between the contractors and the oversight activities develop, the researcher feels that additional reductions will occur because of an increase in the confidence in contractor self-governance. Further research will prove or disprove this hypothesis.

10. Question #9, Increase In Oversight:

Is your company experiencing an increase in the amount or level of Government oversight because of your participation in the CRAG program?

a. Results of Survey:

Experienced Increased Oversight 0

b. Contractor Comments:

While no increase in total oversight was reported, some contractors did comment that, for a reduction of oversight in a CRAG covered area, an equivalent amount of oversight effort was shifted to areas not covered by the CRAG.

c. Analysis:

As expected because of the design of the CRAG program, no increase of oversight was reported by any participants in the program. While oversight resources were transferred to other areas in some cases, no increase was experienced by any participant. The CRAG supports this transfer of oversight effort as it is one of the premises on which the program is based.

Many of the contractors who reported neither a reduction nor an increase in oversight are withholding opinions until they have more experience with the CRAG as explained in the previous subsection.

11. Question #10, Maintaining Compliance with CRAG:

What areas of the CRAG program cause you the most difficulty in maintaining compliance with the procurement regulations?

a. Graphical Presentation of Responses:

Figure 13 represents responses to question 10.

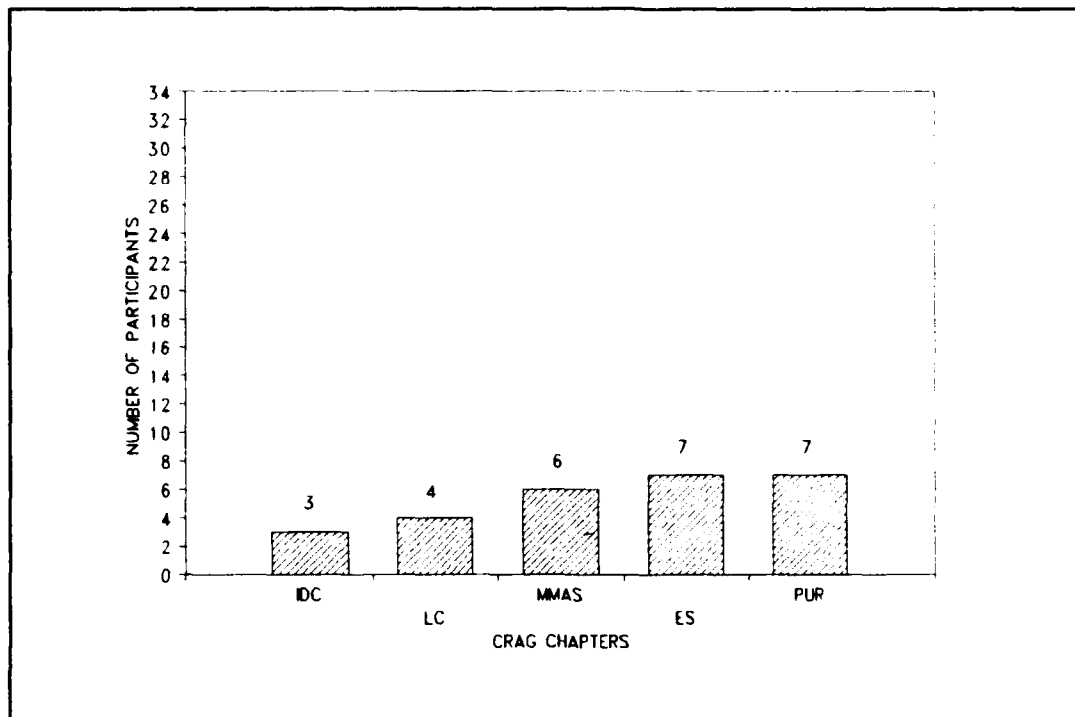


Figure 13: CRAG Participants With Difficulty Maintaining Compliance By Chapter

b. Contractor Comments:

Reasons given for difficulty in maintaining compliance within each area of the CRAG include the subjectivity with which the guidelines and regulations are interpreted and the dynamically changing procurement regulation environment of DOD contracting. Additionally, contractors commented that in some areas, such as ES and PUR, the rules were not well defined and resulted in differing interpretations and allegations of defective pricing and unallowable costs.

c. Analysis:

The ability to maintain compliance with the rules and regulations of the DOD procurement system will vary from contractor to contractor depending upon the utilization of resources and the ethical and prudent business decisions of the employees. The responses clearly indicate that the two areas causing the most difficulty in maintaining compliance are Estimating Systems and Purchasing. The reasons for this trend appears to be that these two areas, while requiring rigid procedures for implementation, contain rules that are subject to wide variation in interpretation. Additionally, the regulatory environment in which they operate is multi-dimensional and under constant scrutiny for modification and alteration, resulting in added confusion as to what methods and regulations are actually current.

12. Question #11, Recommendations For CRAG Improvement:

What recommendations does your company have that would improve the CRAG program as it exists?

a. Contractor Comments

Respondents relayed their opinions that they would like to see stronger participation by the ACOs in the administration of the CRAG effort and that they considered the training accorded the ACO and DCAA representatives inadequate and recommended additional formalized training. An

overwhelming feeling of the contractors was that a formalized quid pro quo be agreed upon at the initiation of program participation, a commensurate reduction in oversight for approved contractor internal control systems.

b. Analysis:

Because of the concept that any action by either party to a contract is due proper consideration by the other party for the stated action, as long as it is within the scope of the conduct of the contract, the researcher entered this study with the notion that viable quid pro quo was inherent in the CRAG program. The emphasis placed on an actual quid pro quo was very apparent in a number of responses received. There is an aura of reluctance on the part of the contractors to believe that they will actually get anything in return for their efforts. This, again, goes back to the trust addressed earlier in the study.

Training of both the Government and contractor personnel on CRAG issues has been developed as a problem area that was unexpected by the researcher. While initial training was held, continuous training has not been addressed but needs to be. As a result of this perceived lack of training, a final observation can be made that if the training were continual, increased participation by the ACO throughout the process would follow which, in turn, would satisfy the rate of participation sought by the contractors.

13. Question #12, Recommendations For New CRAG Chapters:

Are there any areas that your company would like to have included in the CRAG program and why?

a. Contractor Comments:

Of all the responses, including those by phone and personal interviews, the only two areas that were mentioned for development as CRAG chapters were Government property and invoicing/billing procedures.

b. Analysis:

After five years of experience since the implementation of the CRAG, one would think that additional risk areas would be identified for inclusion in the program. The lack of input to this question signals to the researcher that contractors do not wish to see the program, as it currently exists, expand. The prevailing attitude is that the CRAG should not be expanded when there are problems with the present program that have not been adequately addressed. If the CRAG program is allowed to mature through constructive change, contractors may be more receptive to offering their ideas for expansion.

14. Question #13, Modification or Cancellation of CRAG:

Does your company feel that the CRAG program in its present form is serving its purpose or do you feel the program should be modified or even canceled and replaced by another program?

a. Graphical Presentation of Responses:

Figure 14 represents responses to question 13.

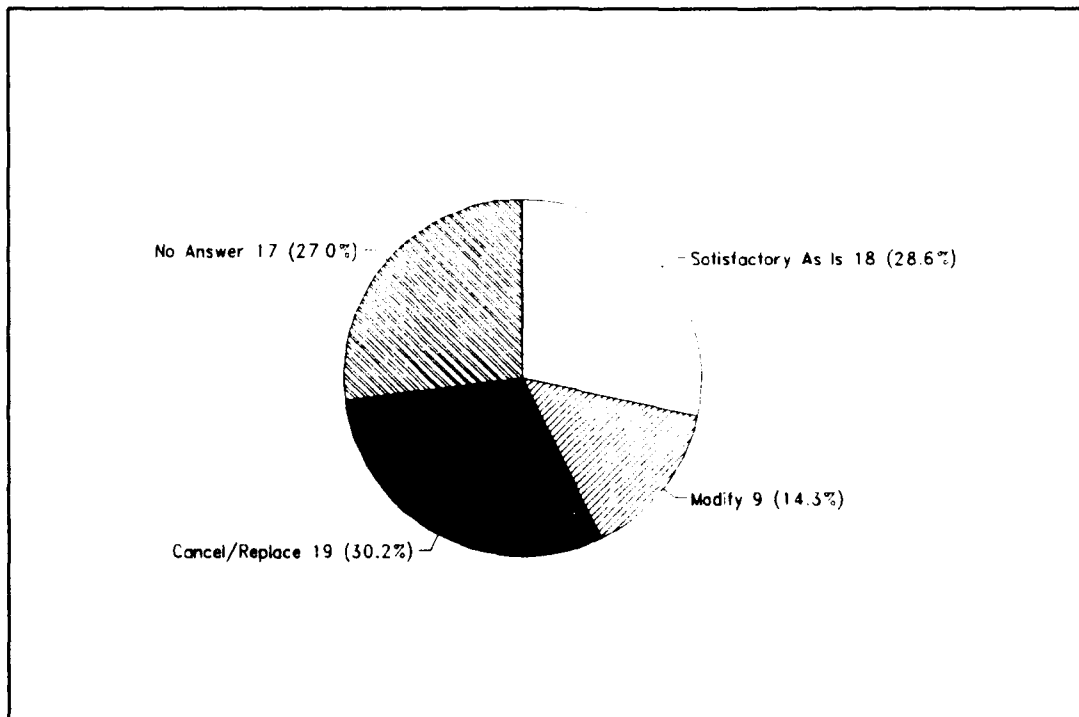


Figure 14: Opinions Regarding Modification Or Cancellation Of CRAG Program

b. Analysis:

Sixty percent of the respondents who answered this question would like to see a change in the program. Their comments will be incorporated with question 14. Forty percent of the respondents indicated that the program was satisfactory as is. Of this 40%, a majority of them were in the early stages of implementation.

This may indicate that, as companies become more experienced with the CRAG program, they discover perceived deficiencies that are counter to the expectations they had

when they entered the program and, as a result, desire to make modifications to the program.

15. Question #14, Recommendations For CRAG Alternatives:

If you checked modify or cancel/replace in question 13, what recommendations would your company make for a program that would maximize the effectiveness and efficiency of the Department of Defense oversight responsibility?

a. Contractor Comments:

Comments from contractors with regard to reasons for modifying or changing the program include that the concept of mutual trust has not been fully achieved through the implementation of CRAG. Also, some contractors feel that there is no reduction in oversight, that they receive no quid pro quo for their efforts. Another input received was that the CRAG or a replacement program needed to better address system analysis and process improvement rather than continuous concentration on individual transactions.

Recommendations from the contractors for modifying or replacing the CRAG program included building in more teaming between industry and Government, adding more incentives to the program for both the contractor and the Government auditors, allow the CRAG to evolve further into Coordinated Audit Planning and complete cancellation of the CRAG program and replacement by DCMC's new program, Process

Oriented Contract Administration Service (PROCAS). The PROCAS program does not limit contractors to certain risk areas, as does CRAG, and it promotes a team approach to contracting administration between the Government and the contractor.

b. Analysis:

From the responses received to questions 13 and 14, it is apparent that a certain amount of adversarial relationship exists between the contractors and Government personnel. The contractors seem to promote more of a team effort in the formulation of audit functions whereby there is not an "us vs. them" atmosphere. At the same time, they want to ensure that whatever program is in place remains open for continuous improvement.

A speculation made by the researcher due to the literature review and preliminary inquiries into the topic was confirmed by the contractors that they feel the CRAG program has stagnated because it has not matured with the current acquisition environment. The current acquisition environment, together with the overall business environment, stresses continuous improvement, while the CRAG does not address continued changes in the purchasing processes.

C. SUMMARY

The companies involved in this questionnaire and those individuals who were interviewed by the researcher displayed a wide variety of opinions about the CRAG program and its

implementation. While no particular individual or contractor has a comprehensive view of the CRAG program, insight has been gained by the researcher about their feelings regarding elements of it.

A handful of issues continued to surface throughout this part of the research. These issues include a quest for a quid pro quo for participation in CRAG rather than empty promises of reduced oversight, the perception that additional training was required of the Government personnel involved in oversight, a desire for greater participation from the ACO and the need for a program that not only is monitored by all parties but also is allowed to mature with a changing acquisition environment.

A final point that was emphasized by most participating respondents that supports the value of the CRAG program is that because of it, channels of communication have been established where none had previously existed. As one contractor put it, they (all parties) no longer sit across the table, they sit at the table.

From the contractors' viewpoint, the CRAG program has acted as a catalyst in reducing the adversarial relationship between Government and industry by instituting more trust and cooperation between the parties. The focus of this study will now be directed toward the opinions of Government personnel about the CRAG program and its perceived benefits and deficiencies.

IV. GOVERNMENT OPINIONS AND ANALYSIS

A. OVERVIEW

The Government began to implement the CRAG in November, 1988. The information contained in the Overview of the previous chapter applies here as well. In addition to the events mentioned in that chapter, DCAA held initial training of all auditors soon after initiation of the program. DCMC (formerly DCAS) personnel were also given introductory briefings. Follow-up training then ensued only on an as-needed basis.

Many efforts were undertaken during the initial years to promote the CRAG program to the defense industry. Even with the heavy promotion of the program, the defense industry was slow to embrace it and they approached it with caution. In May, 1990, Major General C. R. Henry, USA, Commander, DCMC, outlined to industry the CRAG program and plans for program implementation. In August, 1990, John Betti, the Under Secretary of Defense for Acquisition, sent a letter to the executives of major defense firms to encourage their support of and participation in the program [Ref. 41:p. 74]. The DCMC field activities also held conferences and sent correspondence to contractors in their areas, encouraging participation.

Industry participation and Government efforts to promote the CRAG are continuously being reported to the President and the Congress through the annual report of the Secretary of Defense, General Accounting Office (GAO) reports to Congress and testimony to Congressional committees. One GAO report stated that DoD claimed direct Government audit time was reduced by 20,000 and 40,000 hours, respectively, for 1989 and 1990 as a direct result of the CRAG [Ref. 34:p. 10].

In an effort to determine the opinions of Government personnel about the CRAG program, including its benefits, its problems and modification/cancellation recommendations, a questionnaire was sent to 120 ACOs of the DCMC field activities. The reason the ACOs were solicited for input is that they represent the single-face to industry for the Government. The questionnaire is included as Appendix D.

Of the 120 questionnaires mailed, 66 were returned, representing a 55% return rate. Additionally, personal and phone interviews were held with representatives of the Office of the Secretary of Defense, DCAA and DCMC. The results are included herewith.

B. SURVEY QUESTIONS⁴

1. Question #2, Familiarity With CRAG:

Are you familiar with the CRAG program and its benefits?

a. Graphical Presentation of Responses:

Figure 15 represents responses to question 2.

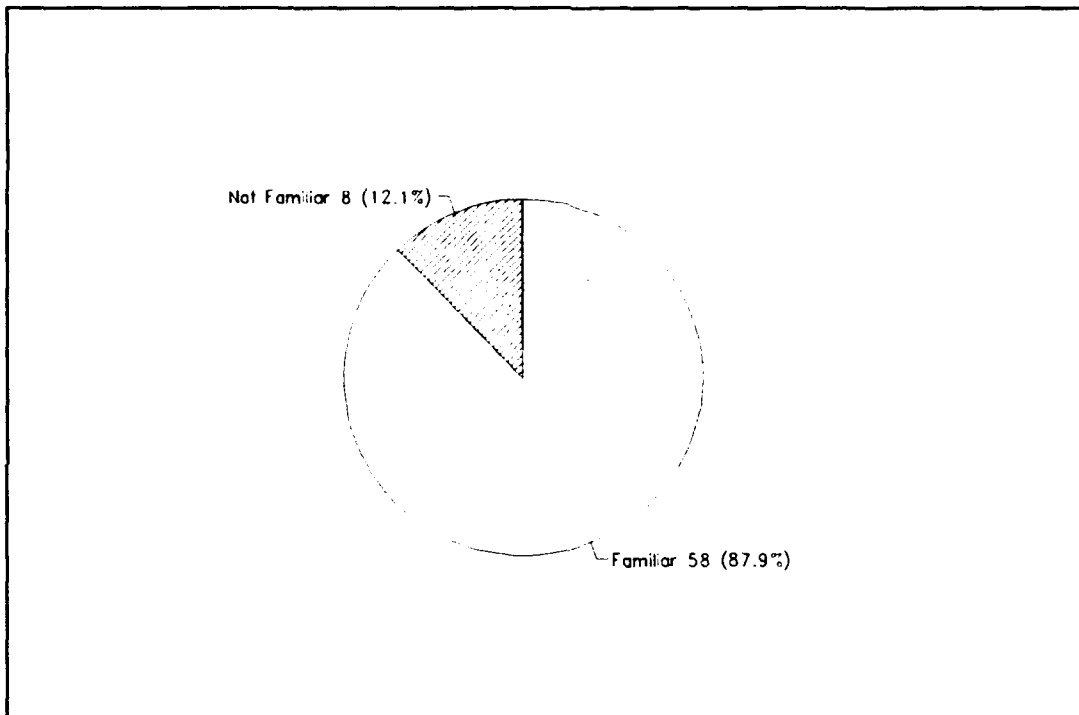


Figure 15: Government Personnel Familiarity With CRAG

b. Analysis:

Because the CRAG is a DoD wide program and because of the wide promotion that the program received in its initial years of implementation, the researcher felt confident that

⁴Question #1 requested the name of the command/activity, name of the person completing the questionnaire and other data that are not included in this thesis.

most, if not all, ACOs would be familiar with the program. With an 88% rate of familiarity, it is apparent that the CRAG is known throughout most of the DOD's ACO community, although a 100% rate of familiarity probably could have been achieved had there still been great emphasis on the program. While this question did not address the level of emphasis, the responses show that the CRAG program has been advertised to most of the personnel who work for DCMC.

2. Question #3, Benefits of CRAG to Government:

What do you think are the top three benefits of the CRAG program to the Government?

a. Government Personnel Comments:

The respondents commented that there is a reduction in the amount of oversight required for contractors, that the relationship with the contractor was improved and that the Government benefitted through a better utilization of resources including personnel, time and money by focusing their efforts on other risk areas.

Also, the respondents indicated that they felt the credibility of the DOD procurement system was improved. They claimed that there was a shift from management by contract to management by systems which improved the efficiency of their efforts. Finally, they reported that they received more efficient and accurate proposals from the contractors.

b. Analysis

All responses received were positive in nature and included no dissenting opinions about the benefits of the program. It was expected that the ACOs would indicate a perception of reduced oversight and better utilization of Government resources and these expectations were supported by the responses as ranking number one and two, respectively, as the top benefits of the CRAG program to the Government. What came as a surprise to the researcher was that 24 respondents indicated that they perceived a shift from contract management to system management as being beneficial to the Government. These data may be indicative of the growth of Total Quality Management within the DoD, whereby management is focused on systems and processes rather than on individual contracts or products, as has been the historical record.

Because of these results, it is the judgment of the researcher that the CRAG can be considered beneficial to the Government.

3. Question #4, Benefits of CRAG to Contractors:

What do you think are the top three benefits of the CRAG program to the contractor?

a. Government Personnel Comments:

The respondents indicated that the contractors benefit from the CRAG program by receiving less oversight in those risk areas of the CRAG that they participate in, that

the contractors also benefit through better utilization of their resources as a result of less duplicative audit requirements and improved internal control systems and that they become more profitable because of the efficiencies that result from CRAG participation. The comments of the respondents also included that the contractors enjoyed a better working relationship with Government personnel and that the competitiveness and reputations of participating firms were enhanced.

b. Analysis:

The results of this question were similar in nature to those benefits accorded to the Government. Three areas that were emphasized by the majority of the Government respondents, in order of precedence, indicated that the contractors had a better working relationship with the Government, that participation in CRAG could lead to reduced levels of oversight and that through participation the contractor could better utilize his resources.

While these were the top three benefits to the contractor according to Government representatives, it is interesting to note that, while similar, they are not the same top three benefits as seen by the contractors themselves. Recall that the contractors concluded that the top three benefits were better communications, better working relationships, and improved internal control systems. It is

the observation of the researcher that Government and contractor personnel are approaching the CRAG with differing expectations that need resolution.

4. Question #5, Type of Training Experienced:

What type of training have you had/do you have with regard to the CRAG program?

a. Graphical Presentation of Responses:

Figure 16 represents responses to question 5.

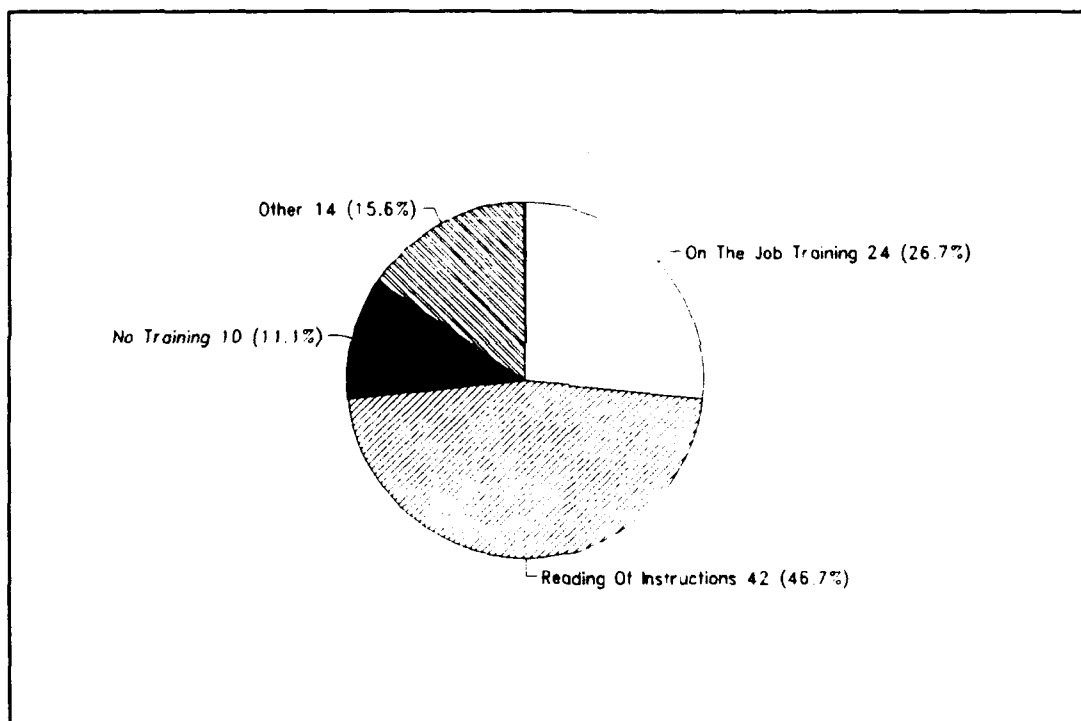


Figure 16: Type of Training Received

b. Analysis:

The literature reiterated many times the emphasis placed on the promotion of the CRAG by the Government during its early stages of implementation and led the researcher to believe that the training accorded the employees would be commensurate with that promotion effort. However, the data indicate that the majority of the training effort directed at the ACOs was in the form of reading of instructions and policies and secondary to that is on the job training through experience. During the course of the research, a plan for continual or annual training on the CRAG did not surface. This may be indicative of a need to focus administrative efforts on devising a better training program, which could lead to increased participation in the program and a higher representation of benefits derived from it.

5. Question #6, Adequacy of Training:

Do you consider that the training you have received to date is sufficient for you to facilitate a contractor's participation in the CRAG?

a. Graphical Presentation of Responses:

Figure 17 represents responses to question 6.

b. Government Personnel Comments:

Respondents' comments included that they only had a limited knowledge of the CRAG objectives and responsibilities through the reading of instructions and that

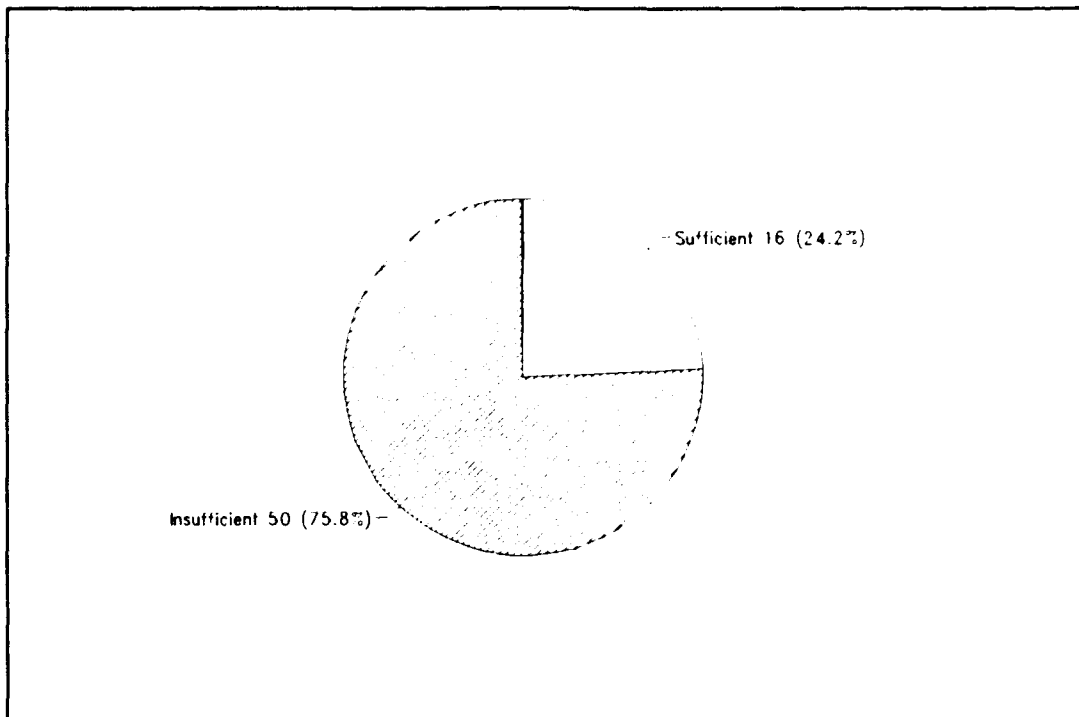


Figure 17: Adequacy of Training

they were not trained in the specifics of the program. Also, many of them commented that the CRAG was more of DCAA initiative and not a DCMC initiative. They further commented that any training they received should include a perspective on the program from DCAA because CRAG is geared more toward their audit and oversight efforts.

c. Analysis:

Because of the researcher's understanding of how budget cuts adversely impact the number of personnel available to perform tasks and the strain placed on training programs, the researcher presumed that training quality would not be satisfactory. That presumption was not too far off.

Of those personnel who responded to the questionnaire, 75% felt that the training they received was inadequate to facilitate a contractor's participation in the program. In portraying the single-face to industry concept, the ACO is the central point of contact for all contract actions after award of the contract. The CRAG is a tool available to the ACO in the administration of contracts, but, if the ACO is insufficiently trained, the program may not be utilized to its fullest potential.

6. Question #7, Promotion of the CRAG Program:

Does your command/activity actively promote participation in the CRAG program by DOD contractors within your area of responsibility?

a. Graphical Presentation of Responses:

Figure 18 represents responses to question 7.

b. Government Personnel Comments:

Respondents indicated that over the past several years many attempts have been made to inform the defense contractors of the CRAG program and its benefits. These attempts have included direct discussions with individual contractors, correspondence sent to all contractors within their area of responsibility, general meetings with groups of contractors and through presentations made to professional organizations. They reported that most of the effort directed at promoting the program was undertaken in 1989, 1990 and 1991

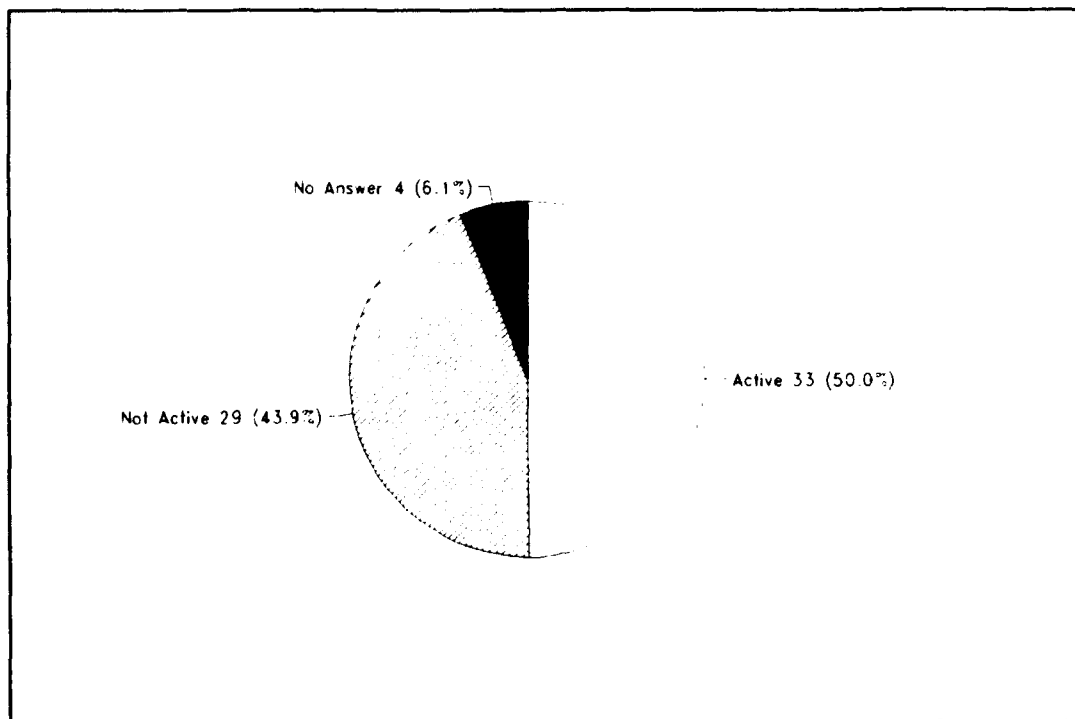


Figure 18: Promotion of CRAG at Field Activities of DCMC

and that a mass promotion of the program has not occurred since that time.

c. Analysis:

Again, the literature research supported active promotion of the program in its earliest years. Efforts to promote the CRAG seem to have peaked in the 1990 to 1991 timeframe. Because of other initiatives and the decline in the defense resources and budgets, promotion of the CRAG seems no longer to be an issue in the forefront. As a result, participation in the CRAG has apparently reached a plateau. Slow initial participation was experienced, followed by an exponential growth in participation through 1991, which was then followed by little to no growth to this point.

There was no indication by DCMC representatives, either through survey responses or phone interviews, that any other formal promotion of the CRAG was being planned. However, through trade association and contractor seminars and meetings, DCMC personnel, along with DCAA personnel, continue to advertise the CRAG.

7. Question #8, Adequacy of Qualification Descriptions:

Do you consider CRAG to be adequate in its description of the qualifications necessary for contractor participation in the program?

a. Graphical Presentation of Responses:

Figure 19 represents responses to question 8.

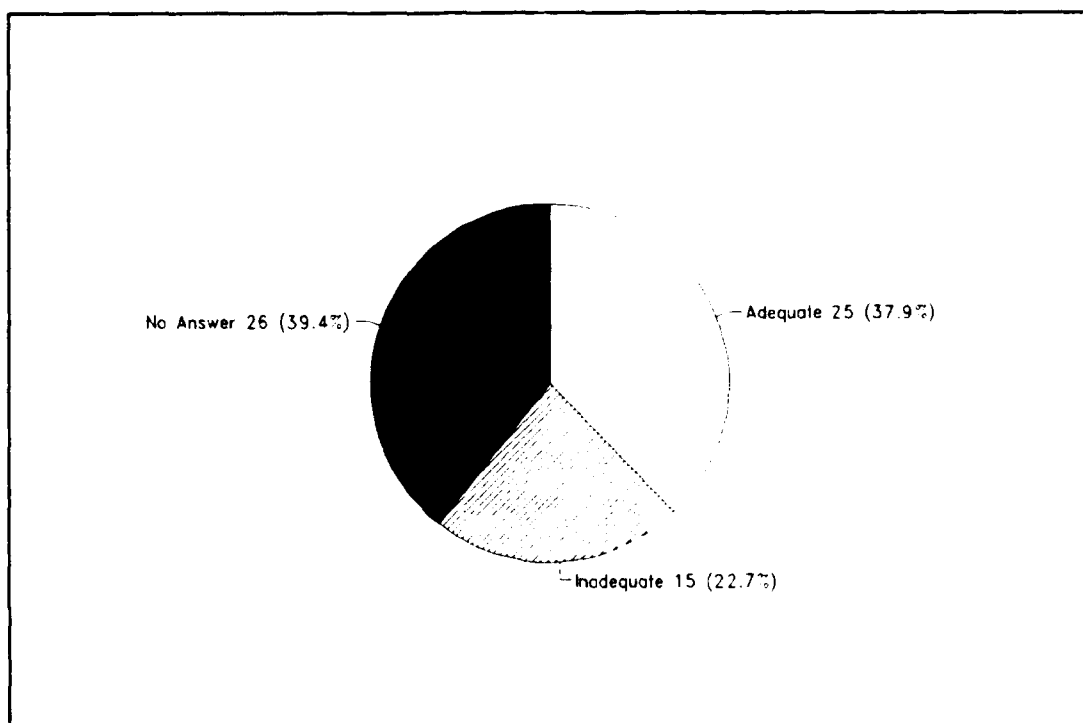


Figure 19: Opinion on Description of Qualifications to Participate in CRAG

b. Government Personnel Comments:

Most of the personnel who answered this question responded that the qualifications required of the contractor to participate in the risk areas identified in the CRAG were sufficient in that they stated what the contractor had to achieve but did not dictate what system had to be used.

Those who responded negatively felt that the qualifications required of contractors' systems were too restrictive and allowed no flexibility. Some commented that the qualifications were open to interpretation and therefore could not be applied uniformly, thus creating an atmosphere of confusion and doubt about who should and should not participate.

c. Analysis:

While some variation in interpretation of program requirements could be foreseen, the wide range of opinions expressed about adequacy of descriptions is indicative of a general confusion regarding the program that was more pronounced than expected. Although not specifically addressed in the survey responses, this confusion could possibly be a direct result of the perceived lack of training addressed previously. With proper training, the ACOs could have a working knowledge of the CRAG and might better understand the descriptions of the qualification requirements for participation in the program.

8. Question #9, Voluntary or Mandatory Participation:

The CRAG program is currently a voluntary program. Do you feel, based on your experiences, that adherence to and participation in the program should become more directed, perhaps even a mandatory contract clause?

a. Graphical Presentation of Responses:

Figure 20 represents responses to question 9.

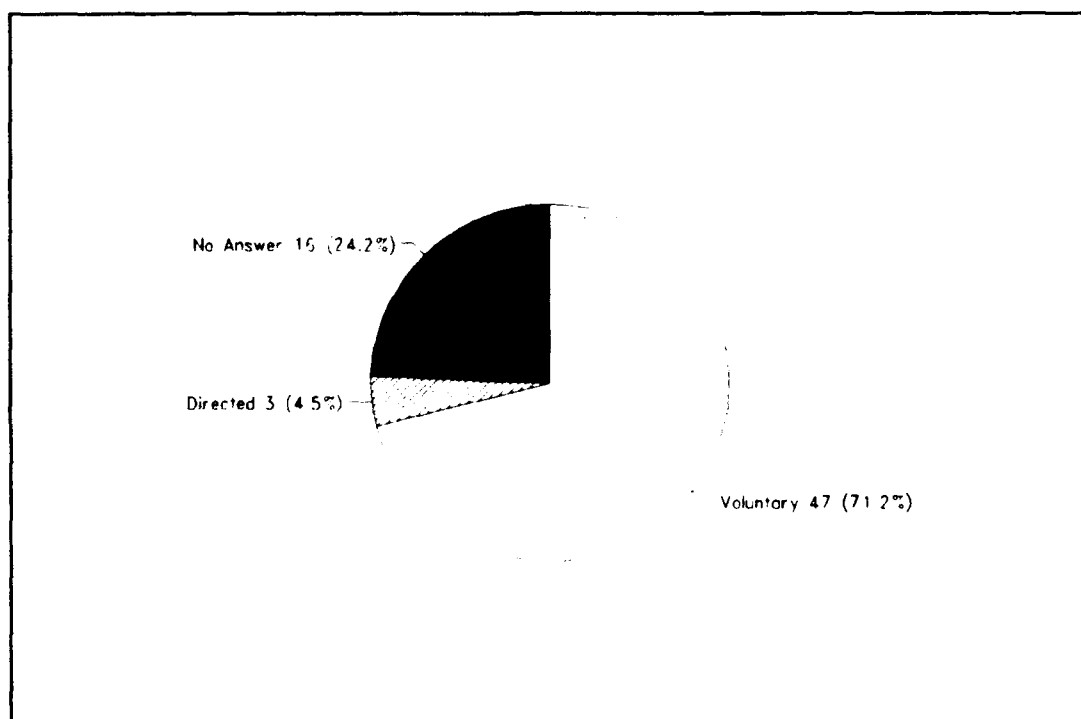


Figure 20: Should CRAG Remain Voluntary or Become Directed

b. Government Personnel Comments:

Comments of the respondents indicated that they felt making the program mandatory, rather than voluntary, would only serve to add another level of bureaucracy and regulation on an already inundated acquisition process. They

responded that making the CRAG mandatory would further strain the relationships between them and contractors and make those relationships more adversarial.

c. Analysis:

It was and remains the judgment of the researcher that maintaining the CRAG as a voluntary program would encourage participation by those who truly want to foster better working relations with the Government. The responses indicate that requiring the DOD contractors to participate would build inefficiencies into the acquisition process rather than create efficiencies. To make CRAG participation a contract clause would just add another line item to the statement of work. To mandate a program like this may restrain innovation by the contractors and the Government because the CRAG becomes just another regulation and serves to disincentivize the parties because they have to participate rather than want to participate.

9. Question #10, Difficulty in Implementation:

What areas of the CRAG program cause the most difficulty in implementation of the program for contractors under your cognizance?

a. Graphical Presentation of Responses:

Figure 21 represents responses to question 10.

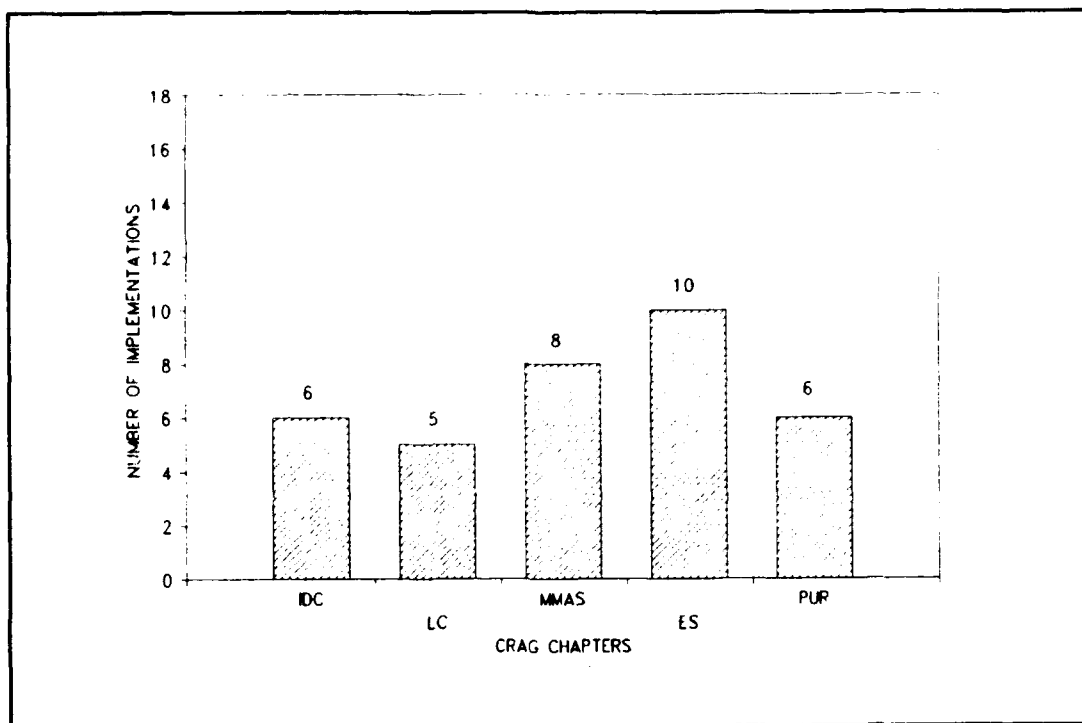


Figure 21: CRAG Chapters with Difficulty in Implementation

b. Government Personnel Comments:

Few comments were received on this issue. The majority of those answering the questionnaire did not answer this question because of a lack of actual experience in implementation of the program. Two comments were received by respondents. One of those responses was that the areas of Labor Charging and Estimating Systems were open to interpretation. The other response reported that in the area of MMAS there existed ten key objectives which, by regulation, had to be proven and therefore implementation and testing of procedures were hindered by that regulation.

c. Analysis:

The researcher made no suppositions about the outcome of this question other than that the Purchasing Systems Chapter should not have had many implementation difficulties.

The ACOs who did answer this question felt that implementation of the Estimating Systems chapter was the most difficult. This may be because of the rapidly changing structure of the defense industry, which tends to play havoc in the computation of overhead rates because of a declining base which was alluded to in the previous Chapter. Because of the difficulty in forecasting future events, contractor estimates continue to be held to close scrutiny.

10. Question #11, Increased or Decreased Oversight:

For those contractors who have elected participation in the CRAG program, as a whole, have they experienced an increase or decrease in the amount or scope of oversight exercised by Government representatives?

a. Graphical Presentation of Responses:

Figure 22 represents responses to question 11.

b. Analysis:

Because of the nature and the bases on which the CRAG program was developed, the researcher anticipated a higher number of reports of reduced oversight activity directed at program participants and no reports of increased

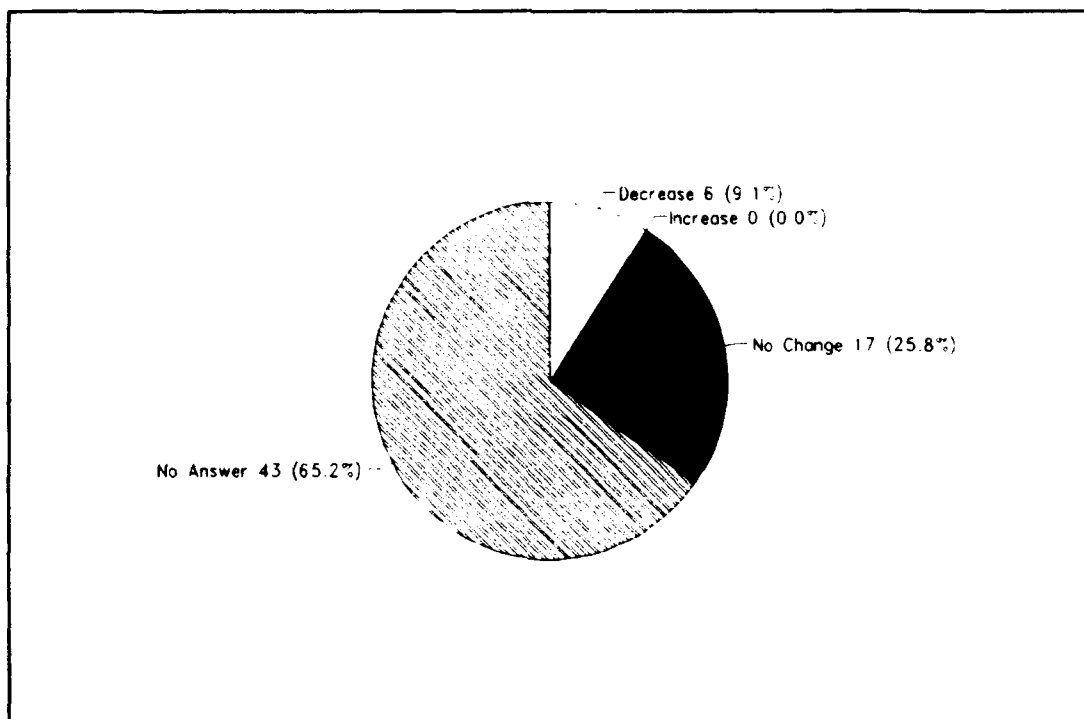


Figure 22: Changes in Oversight As Result of CRAG Participation

oversight.

Of the 23 respondents who answered this question, 74% reported no change in oversight levels and 26% reported a decrease which was less than expected. The 74% who saw no change in oversight levels did not address whether or not there was a shift in oversight effort from CRAG areas to other risk areas. Such a shift may be the cause for no change, but it cannot be determined from the input received.

A more significant finding of the inputs, in support of researcher expectations, revealed that there were no instances of increased oversight, which may indicate that the CRAG program has improved contractor internal control

systems, thereby eliminating the need for continued or additional levels of oversight.

11. Question #12, Specific Data on Contractor Participation:

Can you relay any specific instances where oversight has been reduced/increased as a result of participation of a contractor in the CRAG?

a. Government Personnel Comments:

The respondents relayed that, as a direct result of contractors' participation in CRAG, visits to contractors' sites for surveys were significantly reduced, floor checks were reduced in the area of Labor Charging, DCAA audit time was reduced and, in the area of Purchasing, some ACOs reported that CPSRs were achieved in five days rather than the normal two weeks and waivers were granted for not conducting interim CPSRs.

b. Analysis:

As shown by the inputs, reductions in oversight activity can be achieved through CRAG participation. Amounts and levels varied from contractor to contractor depending on the risk areas covered and the adequacy of their control systems. Surprisingly, the oversight reductions are not concentrated in one particular risk area, but are spread across the spectrum of the CRAG chapters. To the researcher, this leads to an observation that no chapter of the CRAG is

any easier or harder to undertake and that efforts to participate in any chapter are resource equivalent. This introduces the possibility that all participants could expand participation without tremendous growth in resource demands.

12. Question #13, Modification or Cancellation of CRAG:

Do you feel that the CRAG program in its present form is serving its purpose or do you feel that program should be modified or even canceled and replaced by another program?

a. Graphical Presentation of Responses:

Figure 23 represents responses to question 13.

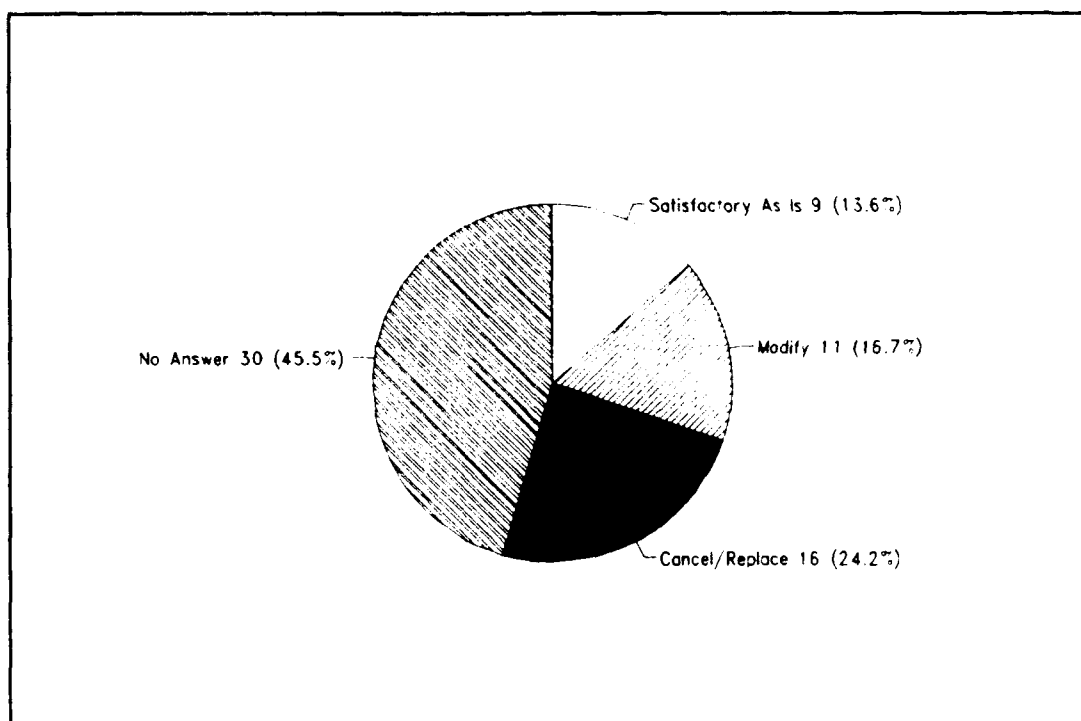


Figure 23: Should CRAG Be Modified or Canceled

b. Government Personnel Comments:

Many of the comments received from the respondents with regard to the modification or cancellation of the CRAG

program call for changing the concentration of the program from simple monitoring of contractors' systems to a program that concentrates on process improvement. The inputs recommend adoption of PROCAS or some other joint initiative, or assimilation of PROCAS practices into the CRAG program.

c. Analysis:

The same speculation made by the researcher in Chapter III that the CRAG program has stagnated because it has not matured with the current acquisition environment was also supported by the Government employees. Of the 36 respondents who answered this question, 75% saw a need for change to the CRAG program through modification or cancellation and replacement. This is indicative that the system has some flaws and has not been modified to incorporate changes in philosophy in the current acquisition environment.

To ensure that this is kept in perspective, it needs to be pointed out that the lack of response by 45% of the total respondents indicates that experience with the CRAG program may be too limited for opinions to be formed as to the need to modify the program.

C. ADDITIONAL DATA

Training of DCAA auditors is accomplished at their facility on the campus of Memphis State University. Included in this training are courses on all aspects of auditing, with specific courses being taught for specializations. The CRAG

initiative is incorporated into this training program. Additionally, the DCAA policy and plans office holds quarterly conferences that serve to sharpen skills and centralize attention to critical areas of the auditing process. These conferences are held nationwide for all DCAA auditors. On more than one occasion during the past three years aspects of the CRAG were the topics of the conferences.

Some of the actions undertaken by DCAA as a result of CRAG participation include reducing staffing at some locations through geographic reassignment and redirecting their efforts toward other risk areas and audit of open overhead years at contractor locations to clear up backlogs. In one case, DCAA removed their office from the contractor's plant because the company's internal control systems were functioning so well that the staff of the office could be better utilized elsewhere.

In response to a request for examples of positive CRAG implementation, DCAA forwarded cases⁵ which included the following results:

- Audit hours saved in area of labor were 800 and 2,000 respectively for fiscal years (FY) 1991 and 1992, mainly attributed to floor checks.
- Improved lines of communications, to include sharing of audit plans.

⁵Due to contractor confidentiality, the names of the companies are not revealed.

- Audit issues resolution procedures were used to reduce open overhead years from 8 years at the beginning of FY 1990 to 3 years at the end of FY 1991.
- Decreases in post award review audit hours and recommended price adjustments. [Ref 42]

While these represent only a few of the success stories, no instances could be found where the CRAG did not work to the benefit of the Government.

D. SUMMARY

The opinions of Government personnel are as varied as those presented by industry personnel. Again, while no one individual or agency has a comprehensive outlook on the CRAG, the researcher has gained an insight into the perceived benefits and deficiencies in the system as seen by Government personnel.

Certain issues continued to appear throughout the conduct of the Government questionnaire and the personal and phone interviews. Those issues include the amount of training afforded the ACOs, the promotion efforts directed at expansion of participation in the CRAG program and a perceived lack of commitment in the reduction of oversight by the oversight activity. Participation in the CRAG program does not guarantee reduced oversight but can lead to it only by Government determination.

As for the benefits of the CRAG program, the research has revealed that Government employees and agencies are

experiencing less adversarial relationships through closer communication and coordination with their industry counterparts. Additionally, resources are being utilized more efficiently as they become available for other taskings because of the success of contractor self-governance.

Now that the opinions of representatives of both the defense industry and the DoD have been recorded and analyzed with regard to the perceived benefits and deficiencies of the CRAG, the conclusions and recommendations of the researcher will be presented in Chapter V.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

Implementation of the CRAG has resulted in reduced oversight at some contractor facilities. As reported by both contractors and DoD personnel, significant reductions have been experienced at facilities of contractors who are participants in the CRAG program. These reductions range from a reduction in the amount and scope of audits to a reduction or elimination of the number of Government auditors performing oversight activities.

The incorporation of the CRAG policies in the administration of DoD contracts has led to a less adversarial atmosphere and improved working relationships between Government and contractor employees. Both the Government and defense industry personnel throughout the course of this study have emphasized that participation in the CRAG has forced them to communicate with each other on a more cooperative basis. No longer do they plan activities related to oversight and audits separately, they coordinate their efforts so that they reduce any duplication of effort and share the results of their work. Of course, the internal control systems accepted by the Government remain the responsibility of the contractor,

but the CRAG facilitates reaching agreement on mutual expectations.

The CRAG is an effective program for furthering the concept of self-governance as recommended by the Packard Commission. One of the primary recommendations of the Packard Commission was that contractors needed to be more active in governing their actions and that the Government needed to rely on those actions. Formulation of the CRAG fulfills that recommendation and implementation at participating contractors has proven its value. As stated in the earlier chapters of this report, contractors and Government officials have reported more reliable internal control systems since beginning participation in the CRAG program.

Implementation of the CRAG has resulted in more efficient utilization of resources for both the Government oversight agencies and the participating contractors. Both the Government agencies and the defense contractors have reported that, because of the reliance they can place on the contractors' internal control systems as a result of CRAG participation, they can reassign personnel to accomplishing other tasks. In the case of the Government agencies, personnel can be shifted to other contractor facilities or utilized to perform other audit functions such as clearing open overhead years. In the case of the contractors, they support this conclusion by reporting the reassignment of

personnel from assisting auditors to performing productive work output on current projects.

Perceived deficiencies exist in the CRAG program. Some defense contractors feel that the CRAG is deficient in offering a commensurate quid pro quo for the level of effort that they exert on the CRAG program. They also report the training of some Government personnel is deficient. The input received from Government personnel supports this perception of inadequate training with regard to the CRAG and its implementation procedures.

And, finally, the CRAG program requires modification to allow for up-front agreement on oversight tradeoffs and to incorporate a CRAG review program to allow it to mature. The survey results support the need to modify the program to get agreement on a quid pro quo for successful participation in the CRAG program. While the program, as it currently exists, only offers to the contractor that reduced oversight will be considered, it adds risk to his operations that tends to disincentivize his actions. As procurement regulations change and the business environment matures, so must the CRAG program if it is to remain viable as an option for reduction of Government oversight.

B. RECOMMENDATIONS

The first recommendation is that the Government and defense continue to support this program. Both the Government

and industry have benefitted from the implementation of the CRAG program. Improved working relationships have evolved because of this type of self-governance program in addition to more efficient and effective oversight efforts. Although a significant number of opinions were expressed to cancel the program, a majority of the contractor (59%) and Government (56%) personnel who responded to the question expressed a satisfaction with the CRAG program as it exists or with some modifications. To facilitate this continued support of the CRAG program, four additional recommendations are offered for consideration.

The four actions include emphasis and promotion of the program; increased levels of training; initiation of a process to monitor, maintain and modify the CRAG program given the versatile atmosphere in which it operates; and building into the CRAG program a quid pro quo for achievement and maintenance of program qualification. In order to do these, Government and industry must continue the cultural change of creating mutual trust within the acquisition process. Without an increasing level of trust and cooperation, any efforts to forge the future may be futile.

Emphasis and promotion of the program is one alternative that needs to be addressed. In researching the available literature on the CRAG program, the researcher discovered that very little has been published about the accomplishments of the program. Most of the literature about CRAG and self-

governance covers just the aspects of the program and its implementation. The researcher found no published results of contractor participation other than in GAO reports and in records of Congressional subcommittee hearings.

The potential exists in the various trade journals for Government and industry to advertise the savings and other efficiencies that have been experienced since the start of the program in 1988. While industry seminars and workshops are held to advance the causes of self-governance and internal controls, it may be overlooked that the audience is very limited. Through the use of the trade journals a greater audience can be reached.

Training is the second issue where improvements can be made. More effort should be directed at training all individuals, both Government and industry, involved in contract administration through participation in the CRAG program. Proactive training would increase the visibility of the CRAG and would familiarize the participants with the intricacies of the program such that they are empowered with the knowledge to act. Such a training program should be standardized so that all personnel get the same information and should be scheduled periodically to ensure that current developments and changes to the program are known.

Setting up a process to monitor, maintain and modify the CRAG program as the defense acquisition environment changes should also be accomplished. No program or business venture

will flourish if it is not allowed to mature with its environment. The CRAG program is five years old and has not, to the researcher's knowledge, been reviewed for incorporation of any changes. In addition, other programs have been introduced such as In-Plant Quality Evaluation, PROCAS and lesser known initiatives that may threaten the existence of the CRAG program if the problems associated with the CRAG are not addressed.

A final recommendation is to modify the CRAG program to better incentivize contractors to participate in it. One of the premises that CRAG is based on is that oversight may be reduced if contractors' internal control systems are determined to be adequate. There is no up front agreement or any type of negotiation about oversight reduction as consideration given for the contractors' efforts. While the Government may be restricted by some laws and regulations, they must be reviewed to see if they can be waived.

While implementation of these recommendations will not resolve all the problems associated with low contractor participation in the CRAG program and the associated opportunity cost of oversight efforts that could have been better utilized, they would be a step in the right direction.

C. ANSWERS TO THE RESEARCH QUESTIONS

To what extent has the CRAG program achieved its goals and objectives and what modifications, if any, should be made to

the program to increase its use and improve its benefits to both Government and the defense industry? The CRAG program, has proven, through implementation at participating contractors' facilities, that it is of benefit to both Government and industry. Although the benefits are there, industry has been reluctant to embrace the CRAG program. Additional information in response to this primary question is addressed in the responses to the subsidiary questions.

What is the CRAG and what are its key objectives? The CRAG is a joint DOD and industry program of self-governance designed to improve contractors' internal control systems, promote self-governance, improve the working relationship between Government and industry and improve the overall efficiency and effectiveness of Government oversight.

What areas of the CRAG do contractors choose/not choose to participate in and what is their reaction to the program as a whole? What are the views of contractors actively involved in any aspect of the program and the views of those who are not participants? There are no specific areas of the CRAG program that contractors choose/not choose to participate in as a whole. Individual companies have their own reasons for choosing full or partial participation in the CRAG program. They tailor their participation to their business involvement with the DOD and whatever expectations and individual goals they have.

Opinions about the CRAG vary greatly. Some of the contractors see benefits to the program while others don't. Included in the list of negative concerns expressed by industry about the CRAG program is the lack of a quid pro quo, lack of involvement and commitment by some DCMC and DCAA representatives and a general lack of training and understanding about the program. On the positive side, most contractors are of the opinion that working relationships have improved as a result of the CRAG program because of greater communication and cooperation.

What is the Government's position on implementation of the CRAG program? The Government continues to promote the concepts of self-governance through the implementation of contractors' internal control systems. The CRAG program is only one effort in this area and is supported by the DOD. Initial efforts to promote the program resulted in some participation by industry, however, there have been no recent major efforts to promote further implementation of the program.

The Government's position is that the CRAG program remains a viable program of self-governance with proven benefits such as reduced oversight of contractors, better utilization of resources and improved working relationships with the defense industry.

What have been the principal deficiencies in the CRAG as noted by both Government and industry representatives and what

actions can be taken to correct those deficiencies?

Insufficient training, lack of commitment to the program and mutual mistrust have been identified by both Government and industry representatives as deficiencies of the CRAG program. Note that the deficiencies exist on the part of both groups. Additionally, not permitting the program to mature was discussed as a problem.

To resolve these deficiencies, training programs need to be instituted that encourage the involvement of all concerned, greater incentives need to be built into the program to facilitate Government and industry commitment and, to counter the mistrust, the mind-sets of all individuals involved need refocusing. This can be achieved through advertisement of shared benefits resulting from CRAG implementation. Finally, a process to review the system for needed modifications requires establishment.

What are the changes to be made to the CRAG to enhance its effectiveness? Should the program be more directed or should it be replaced by an alternative program? Should the goals be altered through greater emphasis, deemphasized or completely changed? The two major changes that were identified in the course of the research that can be made to the CRAG program include the inclusion of a quid pro quo at the initiation of program implementation and the inclusion of other incentives that would promote greater commitment by both Government and industry. The CRAG program should remain a voluntary program

to further enhance innovation and system reviews with the goal of achieving greater efficiencies in the administration of the risk areas and in Government oversight. While the goals of the program are well stated, better salesmanship of attainment of the goals experienced by those currently participating in the CRAG would enhance its attractiveness to the defense industry.

D. AREAS FOR FURTHER RESEARCH

While this research effort gathered opinions from both Government and industry on the CRAG program alone, the researcher discovered that many different initiatives by many Government agencies and many companies have resulted in a state of confusion as to what program should be promoted. In many respects, Government is not presenting a single-face to industry. A recommendation for further research is to compare the costs and benefits of the different self-governance initiatives and try to determine the "best program."

A second recommendation for further research is to analyze the CRAG program and establish a review policy or process to ensure that the CRAG initiative matures with the acquisition environment. Without change, the program will stagnate and quite possibly cease to exist.

A third recommendation for further research is to repeat this study within the next five years to ascertain if CRAG is

still an effective tool in the reduction of Government oversight.

APPENDIX A - LIST OF ABBREVIATIONS

ACO	- Administrative Contracting Officer
CAS	- Cost Accounting Standards
CODSIA	- Council of Defense and Space Industry Association
COSO	- Committee of Sponsoring Organizations of the Treadway Commission
CPSR	- Contractor Purchasing System Review
CRAG	- Contractor Risk Assessment Guide Program
DCAA	- Defense Contract Audit Agency
DCAS	- Defense Contract Administrative Service
DCMC	- Defense Contract Management Command
DFARS	- Department of Defense Federal Acquisition Regulation Supplement
DII	- Defense Industry Initiatives
DMR	- Defense Management Report
DOD	- Department of Defense
DODIG	- Department of Defense Inspector General
ES	- Estimating Systems
FAR	- Federal Acquisition Regulation
GAO	- General Accounting Office
IDC	- Indirect Cost Submissions
IG	- Inspector General
LC	- Labor Charging
MMAS	- Material Management and Accounting System
PROCAS	- Process Oriented Contract Administration Service
PUR	- Purchasing

APPENDIX B - EXCERPT FROM CRAG GUIDE

1. Indirect Cost Submissions

a. Control Objective:

Provide assurance that indirect cost claims, proposals and billings applicable to U. S. Government contracts are prepared and submitted in accordance with U. S. Government laws and regulations.

b. Major Controls:

- Preparation of Indirect Cost Submissions: Provide that policies and procedures are established and maintained to allocate allowable costs in billings, claims, or proposals applicable to U. S. Government contracts in accordance with Federal Acquisition Regulation (FAR) 31.2 and Cost Accounting Standards (CAS).
- Allowability of Selected Costs: Provide that indirect costs identified in FAR 31.205 are properly classified as allowable or unallowable, including directly associated costs, for U. S. Government contract costing, billing and pricing purposes.
- Allocability of Indirect Costs: Provide that indirect costs are properly allocated to cost objectives in accordance with FAR and CAS as appropriate.
- Contractor Compliance Reviews: Provide reasonable assurance that the policies and procedures relating to indirect cost claims, billings, and proposals applicable to U. S. Government contracts are established, currently in practice, understood, and effectively implemented by contractor employees.

2. Labor Charging

a. Control Objective:

Establish timekeeping and labor charging practices which result in the accurate assignment of allowable and allocable labor costs to U. S. Government contracts.

b. Major Controls:

- Policies and Procedures: Provide adequate written policies and procedures for instructing employees on the proper charging of direct and indirect labor, and to reasonably assure the accuracy of recorded time charges to cost objectives.
- Internal Controls: Provide for a system of internal controls to include the maintenance of accurate labor cost

data; the accumulation and recording of labor costs allocable to cost objectives for the purpose of determining proper cost reimbursement on Government contracts; the verification of labor cost transfers; and the segregation of responsibilities for labor related activities.

- Orientation and Training: Establish a labor charging awareness program to train all employees, as appropriate, on proper labor charging practices.
- Time Card Preparation: Assure that labor hours are accurately recorded and that any corrections to timekeeping records are documented including the appropriate authorizations and approvals.
- Allocation of Labor Costs to Cost Objectives: Reasonably assure the proper allocation of labor costs to cost objectives.
- Validation of Undistributed Labor: Provide reasonable assurance that labor transfers or adjustments of the labor distribution are documented and approved.
- Internal Reviews: Monitor the overall integrity of the labor/timekeeping system.

3. Material Management And Accounting Systems

a. Control Objective:

Material management and accounting system must have adequate internal accounting and administrative controls to assure system and data integrity.

b. Major Controls:

- System Description: Material management and accounting systems must have adequate system description, including policies, procedures and operating instructions compliant with FAR and CAS criteria as interpreted by this control objective and its major controls for all elements of affected cost.
- Bill of Materials and Master Production Schedule: MMAS must provide assurance that the costs of purchased and fabricated material charged or allocated to a contract are based on valid time-phased requirements as impacted by minimum/economic order quantity restrictions.
- Operational Exceptions: The MMAS must provide a mechanism to identify, report, and resolve system control weaknesses and manual overrides. Systems should identify operational exceptions such as excess/residual inventory as soon as known.
- Maintenance of Records and Audit Trails: The MMAS must provide audit trails and maintain records necessary to evaluate system logic and to verify through transaction testing that the system is operating as desired. Both

manual records and those in machine readable form will be maintained for the prescribed retention period.

- **Reconciliation of Recorded and Physical Inventory:** The MMAS must establish and maintain adequate levels of record accuracy, and include reconciliation of recorded inventory quantities to physical inventory by part number on a periodic basis. A 95 percent accuracy level is desirable.
- **Transfer of Parts:** The MMAS must provide detailed descriptions of circumstances which will result in manual or system generated transfers of parts.
- **Costing of Material Transactions:** The MMAS must maintain a consistent, equitable, unbiased logic for costing of material transactions. The contractor will maintain and disclose a written policy describing the transfer methodologies. The costing methodology may be standard or actual cost, or any of the CAS 411.50(b) inventory costing methods. Consistency must be maintained across all contract and customer types, and from accounting period to accounting period for initial charging and transfer charging.
- **Allocations From Common Inventory:** In a MMAS where allocations from common inventory accounts are used, it must have controls, in addition the requirements of (2) and (7) above to ensure that reallocations and any credit due are processed no less frequently than the routine billing cycle; inventories retained for requirements which are not under contract are not allocated to contracts; and algorithms are maintained based on valid and current data.
- **Commingled Inventory:** The MMAS must have adequate controls to ensure that physically commingled inventories that may include materials charged or allocated to fixed price, cost type, and commercial contracts do not compromise requirements of any of the above major controls.
- **Internal Compliance Audits:** The MMAS must be subject to periodic internal audits to ensure compliance with established policies and procedures.

4. Estimating Systems:

a. Control Objective:

Provide a system for the development of cost estimates that are current, accurate and complete through the use of appropriate source data; the use of sound estimating techniques and appropriate judgment; the maintenance of a consistent approach; and the adherence to FAR 15-811, other Federal regulations and established company policies and procedures.

b. Major Controls:

- Organization and Assignment of Responsibilities: Provide for a written description of the organization, duties and responsibilities of personnel who prepare, review and approve cost estimates and the various functions that contribute to the estimating process such as accounting, planning, etc.
- Cost Estimate Development: Provide that estimating source data are applied appropriately and that the basis for estimating elements are disclosed by providing written guidelines for developing and supporting consistent and verifiable proposals.
- Compliance Reviews: Management to ensure that the estimating system policies and procedures are up to date, periodically reviewed and implemented.

5. Purchasing

a. Control Objective:

Ensure that adequate purchasing methods are used by contractors for the acquisition of supplies and services under the terms of their contracts with the DOD.

b. Major Controls:

- Policies and Procedures: Provide adequate written policies and procedures for guiding employees in the implementation of efficient and cost-effective purchasing practices.
- Internal Controls: Develop and implement an adequate system of internal controls.
- Subcontract Clauses: Ensure that subcontracts contain all flow down clauses required by the prime contract as well as any clauses needed to carry out the requirements of the prime contract.
- Management of Purchasing: Organize and administer the purchasing department in such a way as to ensure the effective and efficient procurement of required materials and parts at the most economical cost from responsible/reliable sources including appropriate make-or-buy decisions.
- Purchase Requirements: Develop cost-effective and efficient purchase requirements in order to achieve adequate competition, the meeting of delivery schedules, the ordering of economic order quantities, the control of inventory and material and the expediting and follow-up of purchases.
- Selecting the Source: Select the most responsive and responsible sources for providing required materials and promotion of competitive sourcing in order to obtain the

most reasonable prices from sources that meet contractor quality requirements.

- Pricing: Ensure that some form of price or cost analysis will be performed in connection with every purchasing action.
- Subcontract Award and Administration: Ensure that proper types of subcontracts are selected and that there are appropriate controls including oversight and surveillance of subcontracted effort.
- Internal Audit Function: Monitor the overall integrity of the purchasing system.

APPENDIX C - CRAG QUESTIONNAIRE FOR INDUSTRY

1. Name of company:
Address of company:
Person answering questionnaire:
Phone number:
Amount of annual business with DOD:
Type of business/industry:
2. Are you familiar with the CRAG program and its benefits?
Yes ☐ No ☐

If yes, what do you think are the top three benefits of the CRAG?
3. Has your company applied for participation in the CRAG program in the past?
Yes ☐ No ☐

A. If not, please explain why not.

B. If no, do you foresee the possibility of applying for participation in the future?
Yes ☐ No ☐

C. If yes, do you plan on requesting further expansion or a reduction in your participation in the program?
Expansion ☐ Reduction ☐ N/A ☐
4. Does your company consider the CRAG to be adequate in its description of the qualifications necessary to participate in the program?
Yes ☐ No ☐

Please explain.
5. Which of the five areas currently delineated in the CRAG program does your company participate in? (Check as appropriate.)
 - (1) Indirect Cost Submissions ☐
 - (2) Labor Charging ☐
 - (3) Material Management and Accounting Systems ☐
 - (4) Estimating Systems ☐
 - (5) Purchasing ☐

6. Did your company experience any difficulties with implementation of any portion of the CRAG program?
Yes ☐ No ☐

If yes, explain the difficulty and how it was resolved.

7. Are there any areas of the CRAG program that your company chose not to participate in? (Check as appropriate.)

- (1) Indirect Cost Submissions ☐
- (2) Labor Charging ☐
- (3) Material Management and Accounting Systems ☐
- (4) Estimating Systems ☐
- (5) Purchasing ☐

Please explain.

8. Is your company experiencing any reduction in the amount or level of Government oversight because of your participation in the CRAG program?
Yes ☐ No ☐

Please explain nature and extent of reduction.

9. Is your company experiencing an increase in the amount or level of Government oversight because of your participation in the CRAG program?
Yes ☐ No ☐

Please explain nature and extent of increase.

10. What areas of the CRAG program cause you the most difficulty in maintaining compliance with the procurement regulations?

- (1) Indirect Cost Submissions ☐
- (2) Labor Charging ☐
- (3) Material Management and Accounting Systems ☐
- (4) Estimating Systems ☐
- (5) Purchasing ☐

Please explain.

11. What recommendations does your company have that would improve the CRAG program as it exists?

12. Are there any areas that your company would like to have included in the CRAG program and why?

13. Does your company feel that the CRAG program in its present form is serving its purpose or do you feel the program should be modified or even canceled and replaced by another program?

Satisfactory as is ☐ Modify ☐ Cancel/Replace
☐

Please explain.

14. If you checked Modify or Cancel/Replace in Question 13, what recommendations would your company make for a program that would maximize the effectiveness and efficiency of the Department of Defense oversight responsibility?

APPENDIX D - CRAG QUESTIONNAIRE FOR GOVERNMENT

1. Name of command/activity:
Address:
Person answering questionnaire:
Title:
Phone number:
2. Are you familiar with the CRAG program and its benefits?
Yes ☐ No ☐
3. What do you think are the top three benefits of the CRAG program to the Government?
4. What do you think are the top three benefits of the CRAG program to the contractor?
5. What type of training have you had/do you have with regard to the CRAG program?
 - a. On the job training ☐
 - b. Formal classroom training ☐
 - c. Workshops or seminars ☐
 - d. Video presentations ☐
 - e. Reading of instructions/policies ☐
 - f. None ☐
 - g. Other (please describe)
6. Do you consider that the training you have received to date is sufficient for you to facilitate a contractor's participation in the CRAG?
Yes ☐ No ☐

Why or why not?
7. Does your command/activity actively promote participation in the CRAG program by DOD contractors within your area of responsibility?
Yes ☐ No ☐
 - A. If yes, how does your command/activity promote participation.
 - B. If not, please explain why not.
 - C. If no, do you foresee future promotion of the CRAG program?
Yes ☐ No ☐

8. Do you consider the CRAG to be adequate in its description of the qualifications necessary for contractor participation in the program?

Yes ☐ No ☐

Please explain.

9. The CRAG program is currently a voluntary program. Do you feel, based on your experiences, that adherence to and participation in the program should become more directed, perhaps even a mandatory contract clause?

Yes ☐ No ☐

Please explain.

10. What areas of the CRAG program cause the most difficulty in implementation of the program for contractors under your cognizance?

- | | |
|--|--------------------------|
| (1) Indirect Cost Submissions | ☐ |
| (2) Labor Charging | ☐ |
| (3) Material Management and Accounting Systems | ☐ |
| (4) Estimating Systems | ☐ |
| (5) Purchasing | ☐ |
| (6) None | ☐ |

Please explain.

11. For those contractors who have elected participation in the CRAG program, as a whole, have they experienced an increase or decrease in the amount or scope of oversight exercised by Government representatives?

Decrease ☐ Increase ☐ No Real Change ☐

12. Can you relay any specific instances where oversight has been reduced/increased as a result of participation of a contractor in the CRAG?

13. Do you feel that the CRAG program in its present form is serving its purpose or do you feel the program should be modified or even canceled and replaced by another program?
Satisfactory as is ☐ Modify ☐ Cancel/Replace ☐

Please explain.

LIST OF REFERENCES

1. Sherman, Stanley N., Government Procurement Management, Woodcrafters Publications, Germantown, MD, 1991.
2. Packard Commission, Conduct and Accountability: A Report to the President by the President's Blue Ribbon Commission on Defense Management, U. S. Government Printing Office, June, 1986.
3. Brown, June G., Contractor Risk Assessment Guide Program, November, 1988.
4. Mata, Guillermo, "The DOD Contractor Risk Assessment Guide Program", Armed Forces Comptroller, Fall, 1989, pp. 15-17.
5. Reed, William H., Director, Defense Contract Audit Agency, Transcript of Speech Delivered to the Institute of Internal Auditors CRAG Implementation Update Conference, ST. Louis, Missoure, 8 August 1990.
6. Martilla and Kiley, "Opinion Roundup", Public Opinion, March/April, 1988, p. 21.
7. Packard Commission, Quest For Excellence: Final Report, U. S. Government Printing Office, June, 1986.
8. Packard Commission, A Formula For Action: A Report To The President on Defense Acquisition, U. S. Government Printing Office, April, 1986.
9. Sherick, Joseph H., "The Government's Role in Preventing Contractor Abuse", Hearings Before The Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce, 99th Congress, 1str Session, 1985.
10. Packard, David, "The Real Scandal In Military Contracts' "Across The Board", November, 1988, pp 17-23.
11. Spector, Eleanor, "Procurement And The Public Purse", Defense 91, July/August, 1991, pp. 30-32.
12. U. S. Congress, Senate, "Department Of Defense Authorization For Appropriations For Fiscal Year 1986", Hearings Before The Committee On Armed Services, 4 February 1985.
13. Packard Commission, A Quest For Excellence, Appendix, U. S. Government Printing Office, June, 1986.

14. Executive Order 12526, dated 15 July, 1985.
15. Gottlieb, Daniel W., "What's Behind The Noise Surrounding DOD Buying?", Purchasing, May 23, 1985, p. 45.
16. Mann, Paul, "Reagan Names Packard To Head Blue-Ribbon Management Panel", Aviation Week and Space Technology, June 24, 1985, pp. 20-21.
17. "Washington Roundup", Aviation Week and Space Technology, April 22, 1985, p. 17.
18. Gottlieb, Daniel W., "Can Defense Clean Up Its Buying Act?", Purchasing, October 10, 1985, pp. 82-88.
19. Nordwall, Bruce D., "Packard Commission Set to Reconvene", Aviation Week and Space Technology, March 30, 1987, pp. 80-82.
20. "Defense Management Commission Cites Need For Better Internal Controls", Journal Of Accountancy, September, 1986.
21. Packard Commission, Interim Report to the President, U. S. Government Printing Office, December, 1985.
22. Ethics Resource Center, 1988 Annual Report To The Public And The Defense Industry, Defense Industry Initiative On Business Ethics And Conduct, January 1989.
23. Sammet, George, Jr., and Green, David E., Defense Acquisition Management, Florida Atlantic University Press, Boca Raton, FL, 1990.
24. Carren, Paul M., and Keating, William J., "Government Contractor Self-Governance: An Everging Role For Independent CPAs", Journal of Accountancy, April, 1991, pp. 55-61.
25. Department of Defense Federal Acquisition Regulation Supplement, Commerce Clearing House, Inc., 1992.
26. Collins, Stephen H., "June Gibbs Brown: Guarding Defense Dollars", Journal of Accountancy, August, 1988.
27. "Defense Contractor Scrutiny, Guidelines", Journal of Accountancy, March 1989.
28. "Risk-Assessment Guide For Defense Contractors", Journal of Accountancy, August, 1988.
29. Math, Paul F., Director, Research, Development, Acquisition and Procurement Issues, National Security and International Affairs Division, Statement to U. S. Senate Armed Services Committee, Hearings on Department of Defense

Authorization For Appropriations For Fiscal Years 1990 and 1991, 11 May, 1989.

30. Atwood, Donald, "Taking Control", Government Executive, August, 1991.

31. Cheney, Dick, Annual Report to the President and the Congress, U. S. Government Printing Office, Washington, DC, January, 1990.

32. "The DMR at Work: Toward Six Broad Goals", DEFENSE 90, March/April, 1990.

33. Atwood, Donald J., "Living Up To The Public Trust", DEFENSE 90, July/August, 1990.

34. Crawford, Susan J., "Ill Wind and Well-Learned Lessons", DEFENSE 90, July/August, 1990.

35. U. S. General Accounting Office, "Acquisition Reform: Implementing Defense Management Review Initiatives", August, 1991.

36. Forker, John J., "Corporate Governance and Disclosure Quality", Accounting and Business Research, Spring 1992.

37. Steinberg, Richard M., and Tanki, Frank J., "What The Treadway Commission's Internal Control Study Means To You", Journal of Accountancy, November, 1992.

38. Henry, Charles R., Commander, Defense Contract Management Command, Letter to Commander of DCM Regions, Subject: CRAG program Support, 27 March 1990.

39. Federal Contract Report, Number of Contractors Joining DOD's CRAG Program Doubles Since January, vol. 53, no. 20, 14 May 1990.

40. Garrett, Gary A., "DOD's Contractor MMAS Final Rule", Contract Management, April 1991, pp. 26-27+.

41. McMillan, Colin, Acting Under Secretary of Defense for Defense, Prepared Statement for the U. S. Senate Armed Services Committee, "Hearings on the Depart of Defense Authorization For Appropriations For Fiscal Years 1992 and 1993, 9 July 1991.

42. Thibault, Michael J., Assistant Director, Policy and Plans, Defense Contract Audit Agency, Letter to the researcher, Subject: CRAG, 11 February, 1993.

INITIAL DISTRIBUTION LIST

	No. Copies
1. Defense Technical Information Center Cameron Station Alexandria VA 22304-6145	2
2. Library, Code 052 Naval Postgraduate School Monterey CA 93943-5002	2
3. Defense Logistics Studies Information Exchange U. S. Army Logistics Management College Fort Lee, VA 23801	1
4. Professor David V. Lamm, Code AS/Lt Department of Administrative Sciences Naval Postgraduate School Monterey, CA 93943-5000	3
5. Professor James M. Fremgen, Code AS/Fm Department of Administrative Sciences Naval Postgraduate School Monterey, CA 93943-5000	1
6. LT Robert F. Miedzinski, SC, USN P. O. Box 348 Leonardtown, MD 20650	1
7. Mr. Cris Hornsleth Policy Formulation Division (3-207) Defense Contract Audit Agency Cameron Station Alexandria, VA 22304-6178	1
8. Mr. Bill Luke Office of the Secretary of Defense, Comptroller Room 3C965 The Pentagon Washington, DC 20301-1100	1
9. Mr. David Clous Vice President Martin Marietta Corporation 6801 Rockledge Drive Mailpoint 335 Bethesda, MD 20817	1