Audit Report

OFFICE OF THE INSPECTOR GENERAL

AWARD AND ADMINISTRATION OF CONTRACTS, GRANTS, AND OTHER TRANSACTIONS ISSUED BY THE DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

Report No. 97-114 March 28, 1997

Department of Defense

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Acronyms

ACO	Administrative Contracting Officer
CMO	Contracts Management Office
COTR	Contracting Officer Technical Representative
DARPA	Defense Advanced Research Projects Agency
DCAA	Defense Contract Audit Agency
DDR&E	Director of Defense Research and Engineering
DFARS	Defense Federal Acquisition Regulation Supplement
DoDGARs	DoD Grant and Agreement Regulations
FAR	Federal Acquisition Regulation
IR&D	Independent Research and Development
PMR	Procurement Management Review

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

March 28, 1997

MEMORANDUM FOR DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
DIRECTOR, DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

SUBJECT: Audit Report on the Award and Administration of Contracts, Grants, and Other Transactions Issued by the Defense Advanced Research Projects Agency (Report No. 97-114)

We are providing this final report for your review and comment. Management comments on a draft of this report were considered in preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. We request additional management comments on the unresolved recommendations. Appendix K identifies recommendations that require additional management comments by May 28, 1997. Recommendations are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Raymond A. Spencer, Audit Program Director, at (703) 604-9071 (DSN 664-9071) or Mr. Roger H. Florence, Audit Project Manager, at (703) 604-9067 (DSN 664-9067). See Appendix M for the report distribution. The audit team members are listed inside the back cover.

David K. Steensma

David K. Steensma
Deputy Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. 97-114 **March 28, 1997**
(Project No. 5AB-0052)

Award and Administration of Contracts, Grants, and Other Transactions Issued by the Defense Advanced Research Projects Agency

Executive Summary

Introduction. The Defense Advanced Research Projects Agency is the central research and development organization of DoD. The agency's budget for FYs 1993, 1994, 1995, and 1996 was $2.3 billion, $2.6 billion, $2.4 billion, and $2.2 billion, respectively. The Contracts Management Office, Defense Advanced Research Projects Agency plans, negotiates, issues, and administers contracts, grants, cooperative agreements, and "other transactions" to support the Defense Advanced Research Projects Agency mission. For this audit, we examined 18 contracts, valued at $368.4 million; 15 grants, valued at $1 billion; and 28 "other transactions," valued at $1.2 billion and issued or modified during FYs 1993 through 1995. Other transactions are assistance instruments exempt from the Federal Acquisition Regulation and related public laws.

Audit Objectives. Our primary audit objective was to determine whether policies and procedures used to select, award, and administer research projects at the Defense Advanced Research Projects Agency were adequate. We also evaluated the adequacy of management controls related to the primary audit objective.

Audit Results. The Defense Advanced Research Projects Agency needs to improve the management of contracts, grants, cooperative agreements, and "other transactions."

o Contracting officers were not adequately using all available resources (such as contracting officer technical representatives, the Defense Contract Audit Agency, and administrative contracting officers) in awarding and administering contracts. As a result, Defense Advanced Research Projects Agency contracting officers awarded 13 of 18 contracts without documented cost reviews of contractor proposals, contracting officers did not effectively use field pricing support, and contracting officers approved precontract costs without adequate justifications. In addition, field administrative contracting officers did limited monitoring of contractor efforts (Finding A).

o Grant officers needed to improve the award and administration of 9 congressionally directed and 6 other grants, valued at $1 billion, that were reviewed. The Defense Advanced Research Projects Agency unnecessarily advanced more than $15 million to grantees, paid to grantees $1.2 million in unwarranted costs, failed to receive or trace interest payments from 12 grantees, and allowed grantees to accumulate unneeded large cash reserves while falling behind projected work efforts (Finding B).

o Contracting officers did not sufficiently justify use of "other transactions," did not document the review of cost proposals, and did not adequately monitor actual research costs associated with performance payable milestones. As a result, the Defense Advanced Research Projects Agency did not properly justify the use of 24 "other transactions," could expose DoD to cost shares higher than the public law

proposed 50 percent for 20 "other transactions," made payments that exceeded actual costs for 11 "other transactions," and forfeited interest of about $1.9 million (Finding C).

o Contracts Management Office did not adequately establish, assess, test, correct, and report on management controls. As a result, the Defense Advanced Research Projects Agency was not aware of the management and cost problems related to contracts, grants, and "other transactions" (Finding D).

Director, Defense Advanced Research Projects Agency is complimented for initiating corrective actions during the audit for some of the issues identified. Implementation of the recommendations in this report will improve management controls and reduce costs for contracts, grants, and "other transactions." Appendix L summarizes the potential benefits from the audit.

Summary of Recommendations. We recommend that the Director of Defense Research and Engineering issue policy guidance to improve the use of "other transactions" and to ensure that the DoD cost share does not exceed the statutory limit. We recommend that the Director, Defense Advanced Research Projects Agency, establish guidance and procedures that strengthen the agency's methods of issuing contracts, grants, and "other transactions." Specifically, the Director should establish performance measures for contracting officials; enhance the use of pricing assistance from contracting officer technical representatives, administrative contracting officers, and the Defense Contract Audit Agency; and monitor costs associated with research efforts. We also recommend improvements in the acquisition management control system to ensure a more effective system.

Management Comments. The Director of Defense Research and Engineering and the Director, Defense Advanced Research Projects Agency, provided comments to the draft report. The Director of Defense Research and Engineering generally concurred with the report recommendations and stated that guidance will be issued on the use of "other transactions." The Director, Defense Advanced Research Projects Agency, concurred with 25 recommendations, partially concurred with 7 other recommendations, and nonconcurred with 1 recommendation. For recommendations that the Director, Defense Advanced Research Projects Agency, concurred with, planned actions include issuing internal policies and procedures in issuing contracts, grants, and "other transactions" and putting greater emphasis on establishing an effective acquisition management control system. For recommendations that were partially concurred or nonconcurred with, the Director, Defense Advanced Research Projects Agency, provided comments as to why he considered the recommended actions inappropriate or offered alternative corrective action. Part I summarizes management comments to the recommendations, and Part III contains the complete text of comments received from the addressees.

Audit Response. Planned actions by the Director of Defense Research and Engineering and Director, Defense Advanced Research Projects Agency were generally responsive to the intent of the recommendations. Additional comments are requested from the Director of Defense Research and Engineering and the Director, Defense Advanced Research Projects Agency, to clarify the planned actions in response to the recommendations. Appendix K identifies recommendations for which we are requesting additional management comments. Comments are requested by May 28, 1997.

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Part I - Audit Results

Audit Background

Establishment. DoD Directive 5134.10, "Advanced Research Projects Agency," February 17, 1995, identifies the Defense Advanced Research Projects Agency (DARPA) as the central research and development organization of DoD. The agency functions under the authority of the Under Secretary of Defense for Acquisition and Technology and the Director of Defense Research and Engineering. The Agency's budget for FYs 1993, 1994, 1995, and 1996 was $2.3 billion, $2.6 billion, $2.4 billion, and $2.2 billion, respectively. In addition, DARPA receives about $300 million each year from the Military Departments and other agencies in joint research efforts.

Mission. DARPA pursues imaginative and innovative research and development to maintain U.S. technological superiority over potential adversaries. Research can be basic or applied. The primary purpose of basic research is to increase scientific knowledge. Applied research, on the other hand, is to determine and exploit the potential of scientific discoveries or improvements in technology, materials, processes, methods, devices, or techniques.

Acquisition and Assistance Instruments. The DARPA Contracts Management Office plans, negotiates, issues, and administers contracts, grants, cooperative agreements, and "other transactions" in support of the DARPA mission. Contracts are procurement instruments used to acquire goods or services for the direct benefit of the Government. Grants, cooperative agreements, and "other transactions" are assistance instruments used to stimulate research and development efforts for the benefit of the public and the Government.

Contracts. Contracts are used to procure goods or services for the direct benefit of the Government. The Federal Acquisition Regulation (FAR) and Defense Federal and Defense Federal Acquisition Regulation Supplement (DFARS) apply to the award and administration of contracts.

Grants. Grants are used to support or stimulate a public effort, such as research, rather than to acquire property or services for benefit of DoD. Substantial involvement is not expected between DoD and the recipient. Requirements in the public law, the Code of Federal Regulations, Office of Management and Budget circulars, and interim guidance of the DoD Grant and Agreement Regulations apply to grants.

Cooperative Agreements. Cooperative agreements, created by the United States Code, title 10, section 2358, "Research and Development Projects," (10 U.S.C. 2358) are similar to grants and governed by the same policies. The major difference between cooperative agreements and grants is that substantial involvement is expected between DoD and the cooperative agreement recipient.

Other Transactions. "Other transactions," authorized by 10 U.S.C. 2371, "Research Projects: Transactions Other Than Contracts and Grants," are nontraditional methods of acquiring research and development. "Other transactions" are used when using a standard contract, grant, or cooperative agreement is not appropriate. For example, "other transactions" might be appropriate for attracting companies that normally would not do business with the Government. The DoD has provided limited guidance for issuing and administrating "other transactions."

Prior Reviews. In 1991, Inspector General, DoD, reviewed DARPA management controls and compliance with rules and regulations. In 1993, the Defense Logistics Agency, at the direction of the Director, Defense Procurement, performed a Procurement Management Review (PMR) of DARPA acquisition planning and contracting. Those two prior reviews of DARPA contracting functions, proposed corrective actions resulting from the reviews, and lack of implementation of the corrective actions are referenced throughout this report and detailed in Appendix B.

Audit Objectives

The primary audit objective was to determine whether policies and procedures used to select, award, and administer research projects at DARPA were adequate. We also evaluated the adequacy of management controls related to the primary audit objective. Appendix A describes the audit scope and methodology.

Finding A. Contracts

DARPA contracting officers were not adequately using all available resources in awarding and administering contracts. The contracting officers did not adequately use resources because the Contracts Management Office had not emphasized compliance with the 1993 Procurement Management Review corrective actions and the management controls over the agency's contracting practices. As a result, for the 18 contracts reviewed, contracting officers awarded 13 contracts without documented cost reviews of contractor proposals, contracting officers did not effectively use field pricing support, contracting officers approved precontract costs without adequate justifications, and field administrative contracting officers (ACOs) did limited monitoring of contractor efforts.

Research Contracting

DARPA serves as the central research and development organization of DoD with the primary mission to maintain technology superiority. To accomplish its mission, DARPA acquires research and development services from private contractors. DARPA competitively solicits research and development efforts through broad agency announcements published in the *Commerce Business Daily*. The broad agency announcements describe the agency's interests and requirements for scientific study and experimentation directed toward advancing the state of the art. Contractors submit proposals in response to the broad agency announcement. The contractor proposals are evaluated by a team of technical experts knowledgeable in the research area, including the DARPA technical program managers. The team evaluates the proposals based on the criteria identified in the broad agency announcement, which include the offerers' scientific and technical merit, understanding of the proposed effort, experience and qualifications of project personnel, potential contributions and relevance to the DARPA mission, and cost realism.

DARPA awards contracts in accordance with the FAR, DFARS, and internal DARPA policy. The policies and procedures for research and development contracting are contained in FAR part 35, "Research and Development Contracting," for acquiring contractor efforts. The policy states that contracts shall be used only when the principal purpose is the acquisition of supplies or services for the direct benefit or use by the Federal Government.

In February 1993, a PMR lead by the Defense Logistics Agency, conducted for the Director, Defense Procurement, assessed the efficiency and effectiveness of the DARPA contracting operation. The review identified areas requiring management attention and made recommendations to improve operations. The areas that the PMR identified included acquisition planning, solicitation and selection procedures, cost or price analyses, contracting, postaward functions, and management of the contracting function. In response to the PMR, DARPA

established policies and procedures to correct the contracting deficiencies. Appendix B contains issues reported in the PMR. Although DARPA had established the policies and procedures to correct the deficiencies, the changes were not implemented, and the same or similar problems still existed. Therefore, the Contracts Management Office (CMO) did not effectively emphasize compliance with the 1993 PMR recommendations (Finding D).

Summary of Contract Issue Areas

The audit examined 18 randomly selected contracts valued at $368.4 million, issued by the CMO. Our review identified nine issue areas in the awarding of contracts for price determination and administration of contracts. The issues are summarized in Table 1, and the details are in Appendix D.

Table 1. Summary of Contract Issue Areas

Issue Areas Identified	Number of Occurrences	Percent of Occurrence in Sample
Contract Price Determination		
o Minimal documentation of cost proposals reviews by contracting officer technical representative	13 of 18	72
o Use of field pricing support staff		
- No use of cognizant administrative contracting offices	17 of 18	94
- Used Defense Contract Audit Agency for only rate verifications	8 of 17	47
- Unsupported or questioned contractor cost	5 of 9	56
- Price negotiation memorandum did not reflect resolution of audit recommendations	4 of 5	80
o Inadequate precontract cost justification	2 of 3[1]	66
Contract Administration		
o COTR designation letter	4 of 17[2]	23
o COTR performance plan did not identify contract monitoring responsibilities	7 of 7	100
o Submission of documentation to administrative contracting officers		
- Price negotiation memorandum	1 of 9	11
- Status reports	6 of 18	33

[1] Contracts awarded from 1993 through 1995 only.
[2] Denotes contracts awarded before the March 1995 issuance of procedures for DARPA contracting officers to issue designation letters.

Contract Price Determination

The DARPA contracting officers awarded contracts without adequately questioning, requesting, and using the resources and available information necessary for awarding contracts. For example, contracting officers did not question limited cost analyses conducted by contracting officer technical representatives (COTRs) of contractor proposals and did not request field pricing support from cognizant ACOs. In addition, contracting officers did not adequately document the use of Defense Contract Audit Agency (DCAA) report recommendations and approved precontract costs without adequate justification.

FAR part 15, "Contracting by Negotiation," prescribes policies and procedures governing contracting for services by negotiation. FAR subpart 15.805, "Proposal Analysis" states that the contracting officer will use techniques and procedures, such as comparison of costs proposed by the offerer, for individual cost elements with actual cost and previous cost estimates. The contracting officer can request technical analyses of proposals from qualified personnel, and those technical analyses should include the number and kinds of labor hours, labor mix, special facilities proposed, and quantities and kinds of material requested. The contracting officer can request field pricing support from the cognizant administrative contracting officer (ACO) and assistance from the cognizant audit office.

Cost Analyses. The DARPA contracting officers awarded contracts without detailed cost analyses and without documented cost evaluations from the COTRs. COTRs documented cost evaluations of contractor proposals for 5 of the 18 (28 percent) contracts (Appendix D). FAR 15.805 states that the contracting officer shall exercise sole responsibility for the final pricing decision concerning the award of contracts and that the contracting officer is responsible for selecting and using the price analysis technique that will ensure a fair and reasonable price. FAR 15.805 states that the contracting officer will generally request an analysis of contractor proposals to include the need for the labor hours and labor mix, special facilities or equipment, and the overall reasonableness of contractor cost proposals. DFARS 215.805 states that the contracting officer shall request a field pricing report for fixed-priced proposals exceeding $500,000 and cost-type proposals exceeding $10 million. The DFARS threshold was $1 million at the time that the contracting officers awarded the 18 contracts reviewed for the audit. The FAR allows the contracting officer to waive the requirement for the evaluations with adequate written justifications. The contracting officer must obtain a technical analysis from the COTR that examines the direct cost elements of the contractor proposal. In addition, the contracting officer can obtain field pricing assistance from the ACO and DCAA. From the technical analysis and pricing assistance, the contracting officer will establish a negotiation objective.

COTR Evaluations of Contractor Proposals. DARPA policy requires contracting officers to request COTRs to perform a technical analysis of contractor proposals to assist in determining fair and reasonable costs. DARPA contracting officers requested COTR cost and technical analyses of all 18 contracts reviewed. The COTR technical analysis was to address cost

elements including direct labor hours and mix, type and quantity of direct materials, and travel. However, of the 18 contracts reviewed, documentation of the depth and degree of COTR technical analyses were available for only 5 contractor proposals (28 percent). Although DARPA contracting officers were requesting technical analyses from the COTRs, the contract files identified that the contracting officers were only receiving a memorandum from the COTR stating that the costs were fair and reasonable. The memorandums were not supported by documented analyses, and for 13 contracts, the COTRs stated that they did not review the elements of direct costs.

The lack of COTR technical evaluations of direct cost elements in contractor proposals was also an issue in the 1993 PMR. The PMR team reviewed a sample of contracts and determined that the majority of the technical evaluations appeared to be cursory, with little or no discussion of the contractor's proposed cost elements. The PMR acknowledged that cost proposal evaluations for research and development efforts are difficult but stated that the difficulty should not preclude a cost proposal analysis. The PMR report stated that even in the research and development environment, COTR evaluations should discuss direct cost (direct hours, labor mix, direct materials, travel, and subcontractor cost elements) with a COTR explanation to support their recommendations. In response to the PMR, DARPA officials issued a memorandum on June 30, 1994, to contracting officers that reemphasized the importance of receiving properly documented technical evaluations. Also, the June 1994 memorandum from the Director of the CMO to the contracting officers reemphasized the 1991 memorandum on the policy on documenting how prenegotiation positions were derived. The 1994 memorandum also stated that the contract files should document the results of the proposal analysis performed by the appropriate technical personnel. Inadequate documentation of reviews of contractor cost proposals for direct cost elements has previously been identified as a problem at DARPA.

Limited COTR documentation for evaluations of contractor cost proposals is also discussed in the grants and "other transactions" findings in this report. Many of the grants and "other transactions" examined during the audit were awarded after the June 30, 1994, memorandum. As with contracts, COTRs were unable to provide documentation to support the depth and degree of the cost analysis performed, and the lack of documented analyses is a systemic problem in DARPA.

Field Pricing. DARPA contracting officers did not effectively use field pricing support. DARPA contracting officers have the option of using the ACO and audit agencies in determining fair and reasonable costs. The ACO offices are staffed with personnel skilled in the areas of pricing. If requested by the DARPA contracting officers, the staff are capable of performing many of the preaward functions and of monitoring contractor costs as research progresses. However, of the 18 contracts reviewed, DARPA contracting officers requested field pricing reviews from the ACO for only 1 contractor proposal. Also, DARPA contracting officers did not document their use of DCAA reports and, as a result, the contracting officers actions on DCAA recommendations could

not be determined. Finally, DARPA contracting officers did not issue price negotiation memorandums to cognizant administrative and audit offices as required by the FAR when field pricing assistance is requested.

Use of the ACO. The inadequate use of the ACO technical resources was evident in DARPA contract MDA972-93-C-0025 for the Advanced Short Takeoff Vertical Landing Project. DARPA received a cost-plus-incentive-fee proposal of $40 million (basic contract and options). Examination of DARPA contracting records identified that the contracting officer performed limited analysis of the contractor proposal. The DARPA contracting officer waived the requirement for a field pricing support from the ACO because DCAA examined the contractor direct and indirect rates, and the COTR was to perform a technical evaluation. The technical evaluation was to include a review of the direct cost elements (direct hours and mix, type and quantity of direct materials, travel, etc.). The DARPA contracting officer and COTR files did not contain evidence documenting the degree of review performed. Subsequently, the DARPA contracting officer awarded the contract at the contractor's proposed cost.

Use of DCAA. DARPA contracting officers did not fully document use of the DCAA reports. The FAR allows the contracting officer to determine the amount of field pricing support needed. Of 18 contracts reviewed, DARPA contracting officers only requested rate verifications for 8 contracts from DCAA, and the audit report was waived for another contract. DARPA contracting officers requested audits from DCAA for the remaining nine contracts. Of the nine contracts, DCAA provided four audit reports that had no recommendations. The remaining five contracts had DCAA reports that provided recommendations, but our review of the price negotiation memorandums showed that four of the five memorandums did not reflect how the DARPA contracting officer resolved the DCAA recommendations. Contracts issued to Tektronix Federal Systems, Incorporated, and Hughes Aircraft Company illustrate the limited actions taken by DARPA contracting officers on the DCAA audit finding recommendations.

Tektronix Federal Systems, Incorporated. DARPA contract MDA972-92-C-0011 was for development and demonstration of a system using a superconductive microcircuit. The DARPA contracting officer received a DCAA audit report that questioned subcontractor costs totaling $711,100 (10 percent of proposed costs) because the costs were unsupported. The contracting officer advised DCAA that DARPA would review the subcontractor costs. According to the contracting officer records, DARPA did not perform the review, and the contracting officer did not pursue the DCAA unsupported costs.

Hughes Aircraft Company. DARPA contract MDA972-93-C-0059 with Hughes Aircraft Company was a follow-on effort for the development of an airborne infrared measurement sensor. DCAA reported that the interbusiness transfer portion, totaling $1,154,563, of the contractor estimate was either questionable or unsupported. The interbusiness transfer portion of the estimate represented 18 percent of the contractor's proposed costs ($2,901,986 of $15,843,808). The DCAA report notes that the interbusiness

transfers must contain competitive written vendor quotes; bills of material that identify part number, cost, and quantity; and computations of how proposed costs were derived, and that the transfers must not merely provide raw data. In addition, DCAA stated that the contractor did not prepare the proposal in accordance with applicable cost accounting standards and the appropriate FAR provisions. DCAA stated that based on its findings, the contractor proposal should be considered unacceptable as a basis for contract negotiations. Through the examination of DARPA files, we were unable to determine whether the DARPA contracting officer considered the DCAA identified questioned and unsupported costs in the contract negotiations.

Senior DCAA officials stated that DARPA use of DCAA reports has varied widely. The DCAA officials stated that DARPA used some DCAA reports effectively to sustain cost reductions and, in other instances, appeared to have disregarded DCAA advice.

Price Negotiation Memorandum. DARPA contracting officers did not properly prepare price negotiation memorandums and did not issue the memorandums as required by the FAR. DoD Directive 7640.2, "Policy for Follow-up on Contract Audit Report," February 12, 1988, requires contracting officers to give full consideration to contract audit advice and to document the disposition of audit recommendations. FAR 15.808, "Price Negotiation Memorandum," states that the price negotiation memorandum should identify a summary of the contractor proposal, the field pricing report recommendations, and the reasons for any variances from the pricing report recommendations. FAR 15.808 also requires contracting offices to submit a copy of the price negotiation memorandum to the cognizant administrative and audit office when a field pricing report was issued. As previously stated, four of five price negotiation memorandums did not reflect the DARPA contracting officers' resolution of DCAA recommendations. In addition, DARPA contracting officers were not sending copies of the price negotiation memorandums to the ACO or DCAA as required by the FAR for eight of the nine contracts that had requested field pricing support.

DoD Directive 7640.2 also requires that effective disposition of DCAA audit report recommendations be included in contracting officers' performance plans. The CMO contracting officer's standard performance plans did not include effective disposition of DCAA audit report recommendations as a performance measure.

Precontract Costs. FAR Part 31.205-32 "Precontract Costs," defines precontract costs as costs incurred before the effective date of the contract award. Precontract costs are allowable to the extent that they would have been allowable if costs were incurred after the effective date of the contract. DARPA Instruction No. 13, "Program Commitment and Acquisition Procedures," May 15, 1992, establishes the policy for early start requests. The DARPA instruction states that the authorization of precontract costs is reserved for use in emergency situations when the occurrence of the costs is necessary to comply with urgent contract delivery schedules.

DARPA contracting officers continued to approve precontract costs and did not prepare proper justifications for their contract awards as required by DARPA Instruction No. 13. The PMR and the Inspector General, DoD, audit identified the inappropriate approval of precontract costs. The PMR recommendations emphasized the need for technical officers to be more actively involved during the advance planning to preclude routine requests for precontract costs. DARPA concurred with the recommendation of the PMR on early start requests. However, contracting officers continued to allow precontract costs without adequate justifications. The audit identified three contracts that had precontract costs. For two contracts, the justifications did not satisfy the intent of DARPA Instruction No. 13 because contract files had no evidence that the contracts had an emergency situation requiring the use of precontract costs. Because DARPA already has policy on the approval for precontract costs, this report makes no recommendation. However, an effective management control program should prevent this situation, as discussed in Finding D.

Contract Administration

The DARPA contracting officers did not ensure that either the COTR or the ACO properly monitored and administered contracts. Contracting officers did not issue COTR designation letters defining the responsibilities of the COTR. In addition, COTR responsibilities were not specifically identified as a critical job element in the COTR performance plans. Also, the contracting officers did not provide to the ACOs the documents necessary to properly administer contracts (Appendix D).

FAR part 42, "Contract Administration," provides general policies and procedures for performing contract administration functions and related audit services. FAR subpart 42.101 states that agencies requiring field contract administration or audit services should use cross-servicing arrangements with existing contract administration and contract audit components to preclude duplicate demands made on contractors. FAR subpart 42.2 prescribes policies and procedures for assigning, retaining, or reassigning contract administration responsibility; withholding normal functions or delegating additional functions when assigning contracts for administration; and requesting and performing contract administration support. FAR subpart 42.302 lists those responsibilities of the ACO for administering contracts. The responsibilities include reviewing and evaluating contractors' proposals, reviewing and approving the progress payments, analyzing contractor cost proposals for cost and technical merit, ensuring timely submission of required reports, and furnishing comments and recommendations.

The Office of Federal Procurement Policy, Office of Management and Budget, issued the "Guide to Best Practices for Contract Administration," October 1994, to provide techniques that would be useful in performing contract administration by the COTR. The guides stated that the primary weakness in contract administration resulted from contracting officers allocating more time to awarding contracts rather than ensuring that contracts are properly administered.

The guide added that not giving sufficient time and attention to contract administration can lead to poor contractor performance, cost overruns, and delays in receiving deliverables. The guide states that the COTR plays a critical role in affecting the outcome of the contract administration process. The guide identified that COTRs should be properly trained in their duties, COTRs should have well defined roles and responsibilities, and COTR position descriptions should describe contract monitoring as a critical job element.

Contracting Officer Technical Representative. Contracting officers did not issue COTR designation letters that identified the COTR responsibilities and duties for monitoring contracts. Also, COTR performance plans did not specifically include contract monitoring responsibilities as a critical job element. Office of Federal Procurement Policy, Office of Management and Budget, "Guide to Best Practices for Contract Administration," October 1994, recommends the use of COTR designation letters and the identification in performance plans of contractor monitoring responsibilities as a critical job element.

Designation Letters. The DARPA contracting officers did not issue designation letters that identified COTR responsibilities required for monitoring contractor performance. Although the contracts designated COTRs as DARPA technical representatives, the responsibilities identified in the contracts were limited. The 1993 PMR found that contracting officers were not complying with DFARS 201.6, which requires the COTR to receive designation letters that specify the COTR authority, COTR limitations, and period of designation. The DFARS states that the designation letters should identify that the COTR may be personally liable for unauthorized decisions. In response to the PMR recommendation, DARPA issued procedures in March 1995 to contracting officers requiring the issuance of COTR designation letters. However, the DARPA procedures did not require contracting officers to issue COTR designation letters for contracts issued before March 1995. Of the contracts issued before March 1995, only 4 COTRs (23 percent) had COTR designation letters for the contracts.

Performance Plans. DARPA officials did not include contract monitoring as critical job elements in the COTR plans. The COTR has the technical knowledge necessary to monitor contractor efforts and determine whether the contractor is satisfactorily performing the research effort. Review of seven COTR current performance plans identified that they did not specifically state contract monitoring responsibilities as a critical job element, and therefore, COTRs are not held accountable. The "Guide to Best Practices for Contract Administration" recommended contract monitoring responsibilities as a critical job element in COTR performance plans. According to the Guide, identifying contract administration as a critical job element is essential when COTRs handle large, complex contracts, especially cost reimbursement contracts that require extensive surveillance.

Administrative Contracting Officers. DARPA contracting officers did not include the ACO as part of the distribution of required documents necessary to monitor the contractors' efforts. Examination of the 18 contracts identified that DARPA designated an ACO for each contract; however, only 6 contracts

(33 percent) required the contractor to submit cost and project status reports to the ACO. The cost and project status reports are necessary for the ACO to effectively administer the contracts (Appendix D). Furthermore, for 16 contracts, the ACOs stated that they had no contact with DARPA officials during the contracted effort. The contract with Lockheed Missile and Space Company illustrates the lack of use of the ACOs.

The Lockheed Missile and Space Company, contract MDA972-89-C-0020, illustrated inadequate use of ACOs. The DARPA contracting officer identified in the contract the ACO office responsible for administering the contract. However, the DARPA contracting officer did not identify the specific administrative functions that the ACO was expected to perform. The DARPA contracting officer required the contractor to submit the project status reports to the DARPA management support contractor rather than to the ACO. The management support contractor was also on the distribution list to receive directly from the contractor the quarterly technical and final technical reports. The support contractor was also responsible for attending technical and program meetings. The ACO did not have the necessary contract documents to properly administer the contract, and the ACO did not administer the contract. The ACO had limited knowledge of the nature of the research effort and was excluded from any administrative duties. DARPA had no contact with the ACO, and the management support contractor appeared to be performing the contract administration role.

The ACO is responsible for performing the administrative functions of the contract. The ACO functions are identified in FAR 42.302 and are assigned by the contracting officer. ACO functions may include reviewing and evaluating contractor proposals during the negotiations, conducting postaward orientation conferences, monitoring contractors' financial condition, monitoring timely submission of reports, and performing property administration. DARPA contracting officers should issue designation letters specifying ACO responsibilities. Research and development contracts are unique, compared with the contracts for goods or services. Therefore, the contract administration functions may also be unique. For that reason, the DARPA contracting officers should provide guidance and instructions to the responsible ACO to ensure adequate and complete contract administration.

The Defense Contract Management Command of the Defense Logistics Agency provides contract administration services to support the Military Departments and other agencies. The Defense Logistics Agency is composed of field offices located throughout the United States. Approximately 12,400 technical personnel are involved in day-to-day operations at the field offices, staffed with price analysts, systems and industrial engineers, property administrators, and quality assurance specialists. The expertise provided by field organizations' technical personnel could assist the contracting officers and COTRs in monitoring research efforts. The staff possess contractor operations knowledge that would provide assistance in proposal evaluations and that would ensure that contractors are meeting the contract reporting requirements.

Summary

DARPA needs to provide stronger oversight to ensure documented cost reviews are prepared by COTRs in assisting in determining fair and reasonable price and COTR performance plans include contractor monitoring responsibilities as a critical job element. The CMO needs to issue COTR designation letters, improve preparation and disposition of price negotiation memorandums, and delegate ACO responsibilities for research monitoring and distribution of contract documentation to assist in the administration. The recommendations in this report were also recommended in the previous audits and PMRs (Appendix B).

Management Comments on the Finding

DARPA believes that issues of contracting in the finding were not representative of procedures that have been established since the 1993 PMR. DARPA stated that many of the corrective actions were not in place until March 1995 and that the contracts reviewed during the audit were issued before March 1995 and, therefore, the audit results did not reflect the current procedures.

Audit Response

As stated in the finding, the problems identified in this audit were the result of not emphasizing compliance with the 1993 PMR corrective actions, recommendations, and management controls over the agencies' contracting practices. The lack of cost proposal documentation, the lack of use of field pricing support, the inadequacy of precontract cost justifications, the lack of COTR designation letters and responsibilities in performance plans, and the lack of submission of documentation to ACOs necessary to monitor research efforts are management controls that should exist in any procurement activity. Some of those conditions were reported in the earlier 1990 PMR and the 1991 Inspector General, DoD, report. The earlier reviews noted the need to better document the Government negotiation position and preclude the routine use of precontract costs. In addition, CMO issued a 1991 memorandum to contracting officers concerning the need to document the way the contracting officer derived the prenegotiation positions and contracts reviewed should have reflected contracting officers' actions. Therefore, we still believe that the issue requires additional DARPA management attention.

Recommendations, Management Comments, and Audit Response

A.1. We recommend that the Director, Defense Advanced Research Projects Agency:

a. Establish guidance that prohibits the contracting officers from issuing contracts when the contracting officer technical representative has not submitted evidence of documented technical evaluation of the direct cost elements in the contractor proposal.

Management Comments. DARPA partially concurred. The Director, DARPA, stated that he should not constrain contracting officers from performing their functions. He stated, however, that documentation of COTR cost evaluations needs improvement and that DARPA will undertake alternative actions through improved tools for proposal cost evaluations, COTR additional training, and management emphasis.

Audit Response. We consider management comments and the proposed alternative action to be responsive to the intent of the recommendation. No further comments are required.

b. Require that contracting officer technical representative performance plans identify contractor monitoring as a critical job element and establish performance measures for meeting the element.

c. Establish performance measures for contract management officials for the use of contracting officer technical representative evaluation of proposals, for disposition of Defense Contract Audit Agency recommendations, and for use of price negotiation memorandums to reflect differences in contractor proposals and negotiated price.

Management Comments. DARPA concurred with Recommendations A.1.b. and A.1.c. and plans to complete the actions by August 31, 1997.

A.2. We recommend that the Director, Contracts Management Office, Defense Advanced Research Projects Agency:

a. Issue guidance to contracting officers to document in the price negotiation memorandums the rationale for not using Defense Contract Audit Agency recommendations as required by the Federal Acquisition Regulation 15.808, "Price Negotiation Memorandum."

b. Establish procedures to ensure that contracting officers issue price negotiation memorandums to the administrative contracting officer and the Defense Contract Audit Agency in compliance with DoD Directive 7640.2, "Policy for Follow-up on Contract Audit Report," and Federal Acquisition Regulation 15.808, "Price Negotiation Memorandum."

c. Revise the Contracts Management Office contracting officers' standard performance plans to include disposition of Defense Contract Audit Agency audit report recommendations.

d. Issue contracting officer technical representative designation letters for all contracts that have ongoing research. The contracting officer technical representative letter should specify the technical responsibilities and limitations that the representative has in monitoring contractor performance.

e. Require contracting officers to issue guidance to administrative contracting officers on the administrative responsibilities delegated for monitoring the contractor's effort in research contracts.

f. Require contracting officers to include the administrative contracting officers in the distribution of all contract modifications and contract cost and project status reports.

Management Comments. DARPA concurred with Recommendation A.2. and plans to complete all corrective actions by at least August 31, 1997.

Finding B. Grants

The Contracts Management Office (CMO) grant officers needed to improve the award and administration procedures for 9 congressional directed grants and 6 other grants, valued at $1 billion, that we reviewed. The award and administration problems occurred because CMO grant officers did not follow the required Federal and DoD policy established for awarding and administering grants. As a result, CMO grant officers unnecessarily advanced more than $15 million to grantees, paid to grantees more than $1.2 million in unwarranted costs, did not receive or trace interest payments from grantees, and allowed grantees to accumulate unneeded cash reserves while falling behind projected work efforts.

Grant Requirements

The DoD defines a grant as an instrument to support or stimulate a public purpose, such as research, as opposed to acquisition of property or services for the direct benefit of DoD. Substantial involvement is not expected between DoD and the recipient in the research effort. Grants are not subject to the FAR. The requirements for issuing and administering grants are provided in public law, the Code of Federal Regulations, Office of Management and Budget circulars, and the interim guidance in DoD Regulation 3210.6-R, "DoD Grant and Agreement Regulations," February 4, 1994.

The DoD Grant and Agreement Regulations (DoDGARs) established policies in the selection, appointment, and termination of grant officers. The DoDGARs require that the DoD component have a selection process and that grant officers' appointments be in writing. The grant officer selection process should be based on the complexity and dollar value of the grants and the candidates' experience, training, education, and knowledge of the contract process.

Summary of Grant Issue Areas

The CMO grant officers issued 67 grants from FY 1993 through the first 6 months of FY 1995. Appendix C lists the 15 randomly selected grants, valued at $1 billion, included in our review. Our review of the 15 grants identified 4 issue areas in awarding grants and 5 issue areas in administering grants. Grant issue areas are summarized in Table 2, and the details are in Appendix E.

Table 2. Summary of Grant Issue Areas

Problem Areas Identified	Number of Occurrences	Percent of Occurrence in Sample
Awarding Grants		
Lack of review of recipient's qualifications	11 of 15	73
Lack of documented cost analysis	11 of 15	73
Payment method use of:		
Advances	13 of 15	87
Payment schedules	8 of 15	53
Improper appointment of grant officers	15 of 15	100
Administering Grants		
Failure to track interest	12 of 13[1]	92
Lack of financial status reports	8 of 15	53
Lack of timely modifications	8 of 15	53
Letters of delegation not issued to:		
Administrative grant officer	14 of 14[2]	100
Program manager	15 of 15	100
No-cost extensions without reviews	7 of 15	47

[1]DARPA did not advance funds under two grants.
[2]DARPA retained the administrative functions for one grant.

Grant Awards

CMO grant officers did not properly award grants. CMO grant officers did not comply with policy that required reviews of grantees' qualifications, cost analysis of grantee proposals, and selection of appropriate payment methods. Additionally, CMO management did not comply with the DoDGARs requirement to establish a selection process for appointing grant officers.

Reviewing Grantees' Qualifications. DARPA grant officers did not comply with Office of Management and Budget Circular A-110 (the Circular) and the DoDGARs requirement to review grantees' qualifications before issuing grants. The Circular establishes standards for the grantees' financial management, property management, and procurement systems. Before issuing grants, the DoDGARs require that grantees have adequate financial and technical resources, have integrity and business ethics, and have no history of irresponsibilities or serious deficiencies in business practices. The Circular and the DoDGARs apply to universities and nonprofit organizations. DARPA grant officers did not review nonprofit organizations' financial, property, and procurement systems before issuing the grants. For 11 of the 15 grants examined

(9 to nonprofit organizations), the grant files had no documentation that DARPA reviewed recipients' qualifications. Two grantees had material accounting system deficiencies.

Spokane Intercollegiate Research and Technology Institute. In May 1994, the CMO grant officer awarded a $15 million grant to Spokane Intercollegiate Research and Technology Institute (the Technology Institute) to enhance manufacturing and to increase new business development in the northwest United States. Although the grant was the first federally funded grant that the Technology Institute received, the DARPA grant officer did not review the grantee's qualifications as required. In January 1995, auditors for the State of Washington issued a report stating that the Technology Institute had no accounting, property, or procurement systems. In addition, the State auditors issued a second audit of the Technology Institute in February 1996 and determined that the Technology Institute still had management control weaknesses with its accounting system.

Virginia Center of Excellence. In May 1992, the CMO awarded an initial grant to the Virginia Center of Excellence for $7.2 million that was subsequently modified and increased to more than $23 million over a 4-year period. A December 1994 Defense Contract Audit Agency report of the Virginia Center of Excellence states that the Center did not comply with the accounting system requirements of the Circular. In March 1995, DARPA determined that the Virginia Center of Excellence could not satisfy the Circular's requirements and replaced the Virginia Center of Excellence as the grantee with one of the Virginia Center of Excellence's major subcontractors. At the time of our review, the Virginia Center of Excellence was paid the $23 million.

Proposal Cost Analysis. DARPA did not perform cost analyses of proposals before issuing grants. Although the grant files contained memorandums from the program managers stating that costs were reasonable as a result of their technical reviews, the DARPA program managers' reviews were cursory. Of the 15 grants reviewed, 11 grants, valued at about $977 million, did not contain cost analysis documentation (Appendix E). The absence of cost analyses had precluded DARPA from identifying inappropriate costs. For example, if DARPA had performed an analysis of the Virginia Center of Excellence proposal, DARPA could have identified more than $1.2 million in unwarranted costs out of $7.2 million that were included in the proposal. The unwarranted costs were subsequently paid to the grantee.

Payment Methods. DARPA did not prudently use appropriated funds and did not comply with the Circular requirements when establishing advance payments and payment schedules. As a result, grantees acquired unneeded cash reserves. DARPA payment methods included full and partial advances and payment schedules based on payment dates (calendar payments) or expenditures. The Circular requires that payment methods minimize the amount and the time between recipient expenditures and Government reimbursements. While the payment methods based on expenditures were appropriate, we identified problems with payment methods based on advances and calendar payment schedules, as discussed below.

Advances. Grantees received from DARPA advances of more than $15 million that exceeded the minimum needed to initiate the research effort (the Office of Management and Budget allows advances to satisfy minimum requirements). Of 15 grantees, 13 grantees (87 percent) received advances without an examination of whether the advance was needed (Appendix E). Of the 13 grants, 2 grants, valued at $30 million, were advanced a total of more than $22.3 million when the actual requirements were less than $7 million.

Spokane Intercollegiate Research and Technology Institute. DARPA issued a grant to the Technology Institute in April 1994 for $15 million and was advanced $7 million. The Technology Institute's proposed budget indicated an annual requirement of $3.5 million to meet financial obligations for research during the first year. The grant officer could not justify the additional $3.5 million that DARPA advanced. At the end of the first budget year, the Technology Institute only spent $700,000, which resulted in excess funds of $6.3 million. Therefore, even if the advance had covered the Technology Institute's annual budget, the advance of $3.5 million would have exceeded actual expenditures by $2.8 million.

National Center for Manufacturing Sciences. Congress directed DARPA to fund the research efforts of the National Center for Manufacturing Sciences (the National Center) from 1992 through 1995 with appropriations totaling $15.3 million. The National Center submitted to DARPA annual budgets that indicated how the funds would be used. As of January 1996, the National Center had excess funds of $8.9 million remaining from the $15.3 million, which would support research through June 1999, according to National Center officials. Despite the excess funds, National Center officials were requesting the FY 1996 funds of $4 million because the funds were appropriated, not because the funds were needed.

Calendar Payment Schedules. Of the 15 grants, 8 grants were paid based on predetermined calendar dates rather than on the amount of expenditures for the research efforts. The methodology of calendar payment schedules resulted in an accumulation of unneeded cash reserves by the grantees. The calendar payment schedules consisted of equal payments during the life of the grant. The calendar payments were provided either quarterly or annually. Two grantees had accumulated unneeded cash reserves because the payments were not based on actual expenditures.

Spokane Intercollegiate Research and Technology Institute. DARPA established a fixed yearly rate of $2 million as the payment schedule for the $15 million Technology Institute grant and advanced $7 million. Based on the fixed yearly rate, the Technology Institute requested the scheduled $2 million payment for the second year of the grant. At the time that the administrative grant officer received the payment request, the Technology Institute had $6.3 million remaining from the original advance. The DARPA grant officer was advised of the payment request but authorized the payment despite knowledge of the excess funds. Subsequently, DARPA modified the payment schedule under the grant. However, the new payment schedule did not consider the cash reserve, expenditure rate, or research accomplishments.

High Technology Development Corporation. DARPA funded research efforts to the High Technology Development Corporation (the Development Corporation) based on a calendar payment schedule. Despite the Development Corporation's excess reserve of $1.8 million in June 1995, DARPA officials provided additional payments of $3.4 million from August through November 1995. Because the expenditures during that period were about $600,000, the Development Corporation had an excess reserve of more than $4.6 million by December 1995. The DARPA grant officer was unable to identify the Development Corporation expenditure rates because the grant officer was not on the distribution list to receive the required financial status reports.

Grant Officers Selection. CMO management did not appoint grant officers in compliance with the DoDGARs before issuing grants. None of the CMO (5 personnel) assigned to the 15 grants reviewed had the authority to issue grants as required by the DoDGARs (Appendix E). During the audit, CMO management appointed contracting officers by issuing appointment letters. However, the appointments did not satisfy the DoDGARs requirement to appoint grant officers based on experience, grant training, business judgment, and knowledge of the grant process. None of the CMO personnel had received grant training.

Grant Administration

CMO grant officers did not provide adequate oversight for tracking interest payments, using Government funds, and obtaining documentation. Also, grant officers were not:

- o issuing grant modifications in a timely manner,
- o issuing delegation letters,
- o performing adequate program reviews, and
- o reviewing the justification requests before issuing no-cost extensions.

Interest Payments. The Circular and the DoDGARs require grantees to deposit advanced funds in interest-bearing accounts and submit earned interest to the Government annually. DARPA grant officers did not track interest payments and did not consistently notify grantees of where and when to submit earned interest. DARPA grant officers either omitted the interest clause in the grant or informed the grantee to send interest payments to different locations such as the Health and Human Resources, the administrative grant officer, or DARPA. Also, when grantees submitted interest payments, DARPA did not maintain documentation on how much interest had been paid and when the interest should be submitted. For 12 of the 13 grants (2 grants did not receive advances), the grant officers did not track interest (Appendix E), and 4 grants had interest payment problems discussed as follows.

Spokane Intercollegiate Research and Technology Institute. The Circular states that grantees will deposit advances in Federal Deposit Insurance Corporation interest-bearing accounts. The Technology Institute deposited $5.9 million of its advanced funds in United States Treasury bills and other insured interest-bearing accounts. As of April 1996, the Technology Institute had returned $541,129 in interest of which $371,995 was earnings from U.S. Treasury bills. In effect, the Government paid interest on its own funds.

National Center for Manufacturing Sciences. NCMS submitted interest payments of $56,000 in 1993, $118,000 in 1994, and $146,000 in 1995. The administrative grant officers notified the DARPA grant officer about the excessive payments that had resulted in the large amounts of interest and that adjustments to the payment method were needed. However, the DARPA grant officer took no action. In addition, neither the DARPA nor the administrative grant officer records indicated receipt of the 1994, $118,000 payment.

Virginia Center of Excellence. DARPA advanced the Virginia Center of Excellence $5.1 million between May of 1992 and May of 1993 for research efforts. DARPA provided additional funding of $7.8 million between July 1992 and November 1993 for additional research efforts. The Virginia Center of Excellence deposited the funds in an interest-bearing account as required, but the funds exceeded the insurance limitations of the financial institution. The Circular requires that any amount that exceeds insurance limitations must be collaterally secured. The Virginia Center of Excellence did not have the excess funds collaterally secured. In addition, an independent audit found that the Virginia Center of Excellence retained some of the interest that was due the Government. If grant officers properly monitored the grant, they should have known that the Virginia Center of Excellence did not comply with deposit limitation requirements and had not submitted all the interest due the Government.

University of California at San Diego. The University of California at San Diego (the University) remitted an interest payment of $20,000 in October 1994, 1 year after the payment was due. In addition, the University had excess funds, and the University had not submitted additional interest payments to the Government at the time of our review.

Tool for Grant Administration. The Circular requires funds to be deposited in an interest-bearing account. The identification of large interest payments can be a tool in grant administration. An increase in interest payments may indicate that grantees had accumulated excess funds resulting from delays in research or improper payment methods. As a result of this audit, DARPA grant officers issued letters to grantees requesting verification of compliance with the Circular's interest requirements. However, grantees were not required to identify the amount of interest paid or due.

Government Funds. DARPA program managers are responsible for reviewing the research efforts and the use of funds. The Virginia Center of Excellence and the Technology Institute did not prudently use more than $7.2 million in research funding, and grant officers did not take corrective action despite their knowledge of the improper use of funds.

Virginia Center of Excellence. DARPA reimbursed the Virginia Center of Excellence for unwarranted costs totaling $1.2 million. At the time of the grant award in May 1992, for-profit companies could not receive a Government grant. The Virginia Center of Excellence was established as a nonprofit organization by the Software Productivity Consortium and the Center for Innovative Technology, two for-profit companies. The Software Productivity Consortium and the Center for Innovative Technology performed all the research as subcontractors to the Virginia Center of Excellence. A 1994 Defense Contract Audit Agency audit of the Virginia Center of Excellence concluded that the Software Productivity Consortium charged unwarranted fees to the grant, including lobbying retainers. In addition, the Software Productivity Consortium charged administration costs to operate the Virginia Center of Excellence. However, the Virginia Center of Excellence had no employees or facilities. In total, the Software Productivity Consortium charged $1.2 million of unwarranted costs through the Virginia Center of Excellence. While DARPA officials were aware of the unwarranted costs, the DARPA grant officer took no action to recoup the charges.

Spokane Intercollegiate Research and Technology Institute. DARPA officials funded the Technology Institute to perform research to enhance manufacturing technologies. The Technology Institute had excess research funds of $5.9 million and inappropriately invested the funds in U. S. Treasury bills. DARPA officials were aware of the inappropriate investment and took no action to reduce the excess funds or to notify the Technology Institute of the proper use of the research funds that were for support of research efforts and not for investments.

Financial Status Reports and Administrative Documentation. The Circular required grant officials to maintain financial status reports and administrative documentation (modifications) needed to properly monitor grants. DARPA officials did not have financial records documenting the grantees' expenditures, cash reserves, or financial status in 50 percent of the grants reviewed. In addition, modifications should be issued in a timely manner. For the 15 grants reviewed, 8 grants (53 percent) either required the issuance of grant modifications to correct problems or lacked timely issuance of grant modifications. Appendix E identifies grants that had either financial or administrative documentation problems. The lack of adequate grant documentation by DARPA officials presents problems as identified in the two grants discussed below.

SEMATECH. The DARPA grant officer did not issue a grant modification to ensure receipt of proceeds from SEMATECH. SEMATECH consortium received financial assistance since December 1987 for the research and development of semiconductor manufacturing. The SEMATECH grant provided for pooling of Government and consortium funding to share the research costs equally. DARPA and SEMATECH provided funds to Silicon Valley Group, Incorporated, (the Silicon Valley Group) for research and development to acquire new equipment for increasing the manufacturing capabilities. In exchange for the funding, the Silicon Valley Group issued stock warrants to SEMATECH. The stock warrants allowed SEMATECH to either purchase 1,750,000 of the Silicon Valley Group shares for $23.8 million or

exchange the stock warrants for a lesser amount of the Silicon Valley Group stock at no cost. The potential profit to SEMATECH for the stock warrants has ranged from $7 million to $61.9 million. The grant did not contain a clause that allowed the Government to receive proceeds based on its share of the investment when the warrants are exercised. In addition, SEMATECH could not exercise the stock warrants until October 1, 1996, after the grant expired and DARPA participation in the research effort ceased. As a result, the Government would not share in the stock warrant proceeds. DARPA was aware of the stock warrants because of a congressionally mandated independent auditor's report issued in January 1995. The DARPA grant officer should have modified the grant to require SEMATECH to reimburse the Government for proceeds derived from use of the appropriated funds.

Spokane Intercollegiate Research and Technology Institute. The DARPA grant officer did not issue a grant modification designating a replacement technical representative to monitor the Technology Institute grant. DARPA program managers are assigned to monitor the research efforts. The DARPA program manager who was initially identified in the grant left DARPA in November 1994. However, 1 year after the departure of the original manager, the grant officer had not modified the grant to assign a replacement program manager. In addition, the Technology Institute changed the principal investigator conducting the research without the required approval from the DARPA program manager.

Delegation Letters. DARPA did not issue delegation letters that identified responsibilities of administrative grant officers and program managers. Of the grants reviewed, none contained delegation letters to either the administrative grant officers or the program managers.

Administrative Grant Officer. The administrative grant officers were not monitoring grants as DARPA grant officers expected because grant officers had never delegated the grant duties. Administrative grant officers were to assist in monitoring research efforts and to advise the grant officers of problems. The administrative functions should include tracking the receipt of technical reports, receiving financial documentation, and comparing actual costs to budgeted amounts. Although DARPA grants identified the administrative grant office in the grant, DARPA grant officers did not define responsibilities or provide documents necessary to properly administer the grant such as proposals, budgets, or grant modifications. The only function the that administrative grant officers did was to approve grant payments.

Program Managers. The DARPA program managers also were not notified of their responsibilities and authority in monitoring grants. As a result, DARPA program managers acted outside their authority and without knowledge of the grant officers. For example, the DARPA program manager for the Virginia Center of Excellence grant authorized a change in the requirement for delivery under terms of the grant without the grant officer's approval. Only grant officers can authorize changes to delivery requirements.

Program Reviews. DARPA program managers did not adequately monitor grant efforts. Grants continued to receive funding without adequately

determining the need for the additional funds, and grant efforts fell behind schedule without the program managers' knowledge or approval. The National Center and the Earth Conservancy grants illustrated the lack of proper program reviews by DARPA program managers. In both examples, the DARPA officials were unaware that the grantees did not accomplish planned research. Had DARPA officials properly monitored the research status through program reviews, the officials would have been able to take corrective action.

National Center for Manufacturing Sciences. The DARPA program manager did not adequately review the National Center's research effort. If the DARPA program manager had monitored the research effort, he should have known that research was behind schedule and that the National Center had accumulated excess funds of $8.9 million. Based on the expenditure rate, the National Center had sufficient funding to continue the research effort through June 1999. The DARPA program manager should have reviewed the program and requested the necessary adjustments.

Earth Conservancy. The DARPA program manager was unaware that Earth Conservancy did not execute an acquisition before initiating a second grant. In March 1993, CMO issued a $14 million grant to Earth Conservancy to purchase polluted land for environmental research. Despite receiving the funds, Earth Conservancy did not purchase the land by the time the grant expired on September 30, 1993. DARPA was not aware that Earth Conservancy did not purchase the land until May 1994, when DARPA was initiating a second grant for the performance of the research on the land. To purchase the land, the DARPA grant officer had to modify the initial grant 8 months after its expiration.

No-Cost Extension. DARPA routinely issued no-cost extensions to research efforts without reviewing the justification for requests. Of the 15 grants reviewed, 7 grants had no-cost extensions (Appendix E). Extensions were granted without reviews by DARPA officials to determine the basis of the extension. The extensions appeared to be for the purpose of spending excess research funding or retaining staffing levels until new grants were issued rather than continuing the research for unexpected delays.

Summary

We identified material weaknesses in grants issued to nonprofit organizations, and DARPA grant officers did not adhere to requirements in the Circular and the DoDGARs when issuing and monitoring grants. The failure to properly award and administer grants resulted in grantees receiving grants without having the necessary controls in place, grantees accumulating unneeded cash reserves, lost interest payments to the Government, and inadequate monitoring of grants.

Management Comments on the Finding

DARPA stated that the criticism was overly severe because nine of the grants were to nonprofit organizations, were congressionally directed, and were for support and stimulation. Congress does select recipients and funding amounts for some grants. The finding paragraph give an incorrect impression that none of the 15 grants were properly administered and is biased in a negative way. We do accept most of the criticism but the criticism should be constructed in a constructive manner.

Management Comments on the Finding

We have made revisions to more clearly portray the problems.

Recommendations, Management Comments, and Audit Response

B.1. We recommend that the Director, Defense Advanced Research Projects Agency, establish performance measures for grant officer management officials to include measures to review grantee qualification, perform proposed cost analyses, minimize grant advances, track interest payments, obtain financial and administrative documents, and issue delegation letters.

Management Comments. DARPA concurred and plans to put the performance measures into the performance plan of grant management officials by August 31, 1997.

B.2. We recommend that the Director, Contracts Management Office, Defense Advanced Research Projects Agency, develop procedures to:

a. Examine the qualifications of grantees before issuing grants.

b. Require each grant proposal to have a documented cost analysis and review the need for no-cost extensions before approval.

c. Minimize advance payments and verify that advanced funds are deposited in interest-bearing accounts as required by Office of Management and Budget Circular A-110, "Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations."

d. Base the research payment methods on work efforts accomplished.

e. Appoint grant officers in accordance with the DoD Grant and Agreement Regulations.

f. Track interest payments on grants and verify that grantees are submitting interest payments to the U.S. Treasury annually.

g. Require grantee proposals, budgets, grant modifications, grant cost analyses, and financial status information to be issued to the administrative grant officers to assist in their grant administration.

h. Require each grantee to submit financial documentation that includes grantees expenditures, cash reserves, and financial status as required by the Office of Management and Budget Circular A-110, "Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations."

i. Define the responsibilities and authority of the administrative grant officers and program managers and issue letters delegating those responsibilities and authority.

Management Comments. DARPA concurred and plans to develop procedures to address the recommendation by June 30, 1997.

B.3. We recommend that the Director, Contracts Management Office, Defense Advanced Research Projects Agency, take the following actions on grants:

a. Evaluate the Spokane Intercollegiate Research and Technology Institute research effort, request a new budget, change the payment method, review the accounting system, and withdraw all excess advanced funds.

b. Evaluate the National Center for Manufacturing Sciences research effort, request a new budget, change the payment method, and withdraw all excess advanced funds.

Management Comments. DARPA partially concurred stating that it agrees with most of the recommended actions except withdrawal of funds already placed on the grant. As an alternative, DARPA would direct attention to solving expenditure and performance problems and would withhold further funding until warranted, to be completed by March 31, 1997.

Audit Response. Management comments and proposed alternative actions are responsive to the intent of the recommendations and no further comments are required.

c. Obtain $1.2 million from the Software Productivity Consortium for unwarranted costs.

Management Comments. DARPA nonconcurred, stating that neither the Virginia Center of Excellence nor the Software Productivity Consortium were

involved in any wrongdoing. The Virginia Center of Excellence, which was the source of the questioned cost, was removed as the grantee on March 20, 1995, and is no longer involved in the grant. DARPA stated that the Software Productivity Consortium had an acceptable technical performance record, and the grant officer has no legal basis for recouping charges that were neither illegal nor unallowable.

Audit Response. Management comments were nonresponsive. As identified in the finding, the Virginia Center of Excellence was established for the sole purpose of obtaining a grant for research by two for-profit companies. The Virginia Center of Excellence had no employees or facilities, and a Defense Contract Audit Agency report states that the Software Productivity Consortium charges associated with the Virginia Center of Excellence were unwarranted. The Government received no benefit from the $1.2 million of unwarranted costs and to not even attempt to recoup funds is a failure to exercise proper stewardship of DoD funds. We request additional management comments to the final report that identify how DARPA determined, in response to this recommendation, that it established no wrongdoing and no basis for cost recoupment.

d. Modify the SEMATECH grant to provide that the Government receive compensation commensurate with its investment from the stock warrant proceeds, if exercised.

Management Comments. DARPA partially concurred, stating that SEMATECH and the grant officer are examining the stock warrant issue, which will be referred to the Director, DARPA, for a decision on the Government's course of action by December 31, 1997. That action could include seeking compensation for the Government.

Audit Response. We believe that the purpose of providing grant funding was for research assistance and not for investment and, as a result, SEMATECH should not be rewarded for this use of the appropriated funds. Because management comments indicated that the parties' positions will be referred to the Director, we request additional comments to this final report on the status of the Director's decision so that we can track the corrective action.

e. Verify that the National Center for Manufacturing Sciences submitted the interest payment of $118,000. If not, take appropriate action to obtain the interest payment.

Management Comments. DARPA concurred, stating that it will take the appropriate action by March 31, 1997, after determining the status of the interest payment.

Audit Response. We request additional management comments to the final report stating specific actions taken on the recommendation.

Finding C. Other Transactions

DARPA contracting officers did not sufficiently justify the use of "other transactions," did not document the review of cost proposals, and did not adequately monitor actual research costs associated with performance payable milestones. Those conditions occurred because DARPA did not comply with the law and the Director of Defense Research and Engineering guidance for selecting "other transactions." In addition, no guidance exists for evaluating proposed contributions, for monitoring actual research costs, and for including an interest provision in "other transactions." As a result, DARPA did not properly justify the use of 24 "other transactions," could expose DoD to cost shares higher than the public-law-proposed 50 percent for 20 "other transactions," made payments that exceeded actual costs for 11 "other transactions," and forfeited interest of about $1.9 million.

Other Transactions Policy

"Other transactions" are new instruments to obtain research efforts. "Other transactions" are not used to acquire goods or services for the direct benefit of the Federal Government. When "other transactions" are used, they usually include cost-sharing between the Government and non-Government parties.

Legal Authority. The 10 U.S.C. 2371 (the Law) provided DARPA and the Military Departments the authority to enter into "other transactions" for advanced research projects. The Law allows the use of "other transactions" when the use of a standard contract, grant, or cooperative agreement is not feasible or appropriate. "Other transactions" are assistance instruments issued to stimulate research efforts and are not traditional contracts. The Law also requires that Government funding in "other transactions" should not exceed the funding provided by the non-Government parties to the maximum extent practical.

DoD Guidance. The Director of Defense Research and Engineering (DDR&E) provided interim limited guidance in a February 8, 1994 memorandum, on the use of "other transactions." The guidance states that "other transactions" will be used when a standard contract, grant, or cooperative agreement is not appropriate or feasible. The February 8, 1994, memorandum also issued DoD Grant and Agreement Regulations (DoDGARs) 3210.6-R, February 4, 1994, that governs the use of grants and cooperative agreements, but the guidance did not address "other transactions." The DoDGARs require that the recipients of cooperative agreements have accounting systems that comply with the generally accepted accounting principles.

The DDR&E guidance defines when using grants, cooperative agreements, and "other transactions" is appropriate A grant is a legal instrument to support or stimulate a public effort, such as research, as opposed to acquisition of property

or services for the benefit of DoD. When grants are issued, substantial involvement in the research effort is not expected between DoD and the research participant. When cooperative agreements are used, substantial involvement is expected between the DoD and the research participant. "Other transactions" are used when neither grants or cooperative agreements apply.

Cooperative Agreements and "Other Transactions." Cooperative agreements and "other transactions" can be used for research efforts with consortiums and profit and nonprofit organizations. A consortium may be composed of contractors, state governments, universities, and other nonprofit organizations. Cooperative agreements and "other transactions" are flexible instruments for the accomplishment of research. The instruments reduce Government reporting requirements, are not governed by the FAR and DFARS requirements, and do not require Government-approved accounting systems. DARPA provides oversight through participation in technical management reviews, review and approval of performance payable milestones, and review of program and financial status reports.

The treatment of patent rights is a substantial difference between cooperative agreements and "other transactions." In cooperative agreements, the Government has specific rights, provided and required by statute. In the case of "other transactions," the Government has more flexibility to negotiate provisions appropriate to the circumstances.

Solicitation and Award. DARPA issues cooperative agreements and "other transactions" in response to proposals from broad agency announcements, special research announcements, and program solicitations. The proposal evaluation process consists of an examination of the technical approach, cost realism, and consortium contributions. Contributions may include cash, cash equivalents, in-kind contributions, and independent research and development (IR&D). Cash equivalents represent consortium employee labor costs associated with the research effort. In-kind contributions include labor cost, lease use of real property, acquisition of special equipment, and the value of goods and services provided by the consortium members. The IR&D contributions are composed of the value of prior research efforts or, in some cases, the cost of performing a research effort by the consortium member(s). The consortium members proposed the contributions as their cost share. The Government contributions consist of cash payments to the consortium based on accomplishment of performance payable milestones.

Performance Payable Milestones. DARPA and the consortia establish the performance payable milestones at the time of the award based on an estimated amount for accomplishing each milestone of the research. The consortium submits the invoices to DARPA for payment. DARPA certifies that the consortium accomplished the milestones and makes the payment to the consortium lead member. The consortium lead member disburses DARPA payments to the consortium members as established in the agreement. "Other transactions" allow for adjustment to performance payable milestones, if necessary.

Audit Policy. The DoD Directive 7600.2, "Audit Policies," February 2, 1991, provides policy and procedures that the DoD agencies must use to acquire audit services. The Directive states that the DoD Components shall only contract for audit services when the audit expertise is not available within DoD. The Directive also requires that the DoD Component obtain approval from the Office of the Inspector General, DoD, before advertising for the audit services. The Inspector General issued a memorandum on May 28, 1996, reinforcing DoD Directive 7600.2. The memorandum states that all solicitations for procuring audits from outside sources must be submitted and reviewed by the Assistant Inspector General for Policy and Oversight before release to prospective bidders. The Assistant Inspector General for Policy and Oversight reviews are required to ensure the appropriate use of non-Federal auditors and compliance with applicable Government auditing standards.

Summary of "Other Transactions" Issue Areas

The CMO issued 75 "other transactions" from FY 1993 through the first 6 months of FY 1995. Our review of 28 randomly selected "other transactions" identified problem areas in the awarding and administering of "other transactions." The problem areas are summarized in Table 3, and the details are in Appendix F.

Table 3. Summary of "Other Transactions" Issue Areas

Problem Areas Identified	Number of Occurrences	Percent of Occurrence in Sample
Awarding "Other Transactions"		
Did not have an acceptable determination and finding justification	24 of 24	100
Did not have supporting documentation of contribution cost analysis	20 of 23	87
Did not determine the value of in-kind contributions	13 of 14	93
Did not determine the value of IR&D contributions	6 of 7	86
Did not include interest provision clause in agreement	25 of 28	89
Administering "Other Transactions"		
Did not pay interest to the Government	27 of 28	96

The audit consisted of a review of 28 "other transactions." All of the items reviewed were not applicable to each of the problem areas identified above. Therefore, the number of occurrences in Table 3 were calculated based on their applicability.

Determination and Finding

DARPA Determination and Finding justifications for 24 "other transactions" were inadequate to establish that the instrument selected met the requirements of law and DDR&E guidance (Appendix F).[1] The purpose of the justifications was to document the appropriateness and authority for the use of an "other transaction" instrument.

Determination and Findings. DARPA contracting officers did not adequately justify the use of "other transactions." The Law and DDR&E interim guidance require the consideration of the use of standard contracts, grants, and cooperative agreements before use of "other transactions." CMO prepared justifications to document the use of "other transactions." In all 24 justifications reviewed, the CMO either cited the Law, provided a general justification, or did not specifically state the reason why a cooperative agreement could not be used. In addition, the justifications contained no discussion as to the need to use an "other transaction" because of the demand for retention of patent rights that precluded the use of a cooperative agreement. Two examples of inadequate justifications by CMO, MCM-D Consortium and Precision Laser Machining Consortium, are discussed below.

MCM-D Consortium. "Other transaction" No. MDA972-94-3-0035 was for the development of large-format deposited multi-chip module manufacturing technology. The justification stated that an "other transaction" was used under the authority of 10 U.S.C. 2358 and 2371. The justification stated that substantial involvement is expected between DARPA and members of the consortium; therefore, a standard grant was not appropriate. In addition, the justification stated that "a traditional cooperative agreement is also inappropriate because the transaction will not be entered into with a nonprofit or educational institution." Further, the justification stated that "although grants and cooperative agreements can be entered into with profit organizations, this effort could only result in a non-standard cooperative agreement given the level of DARPA involvement." However, the justification did not identify the differences between a traditional or non-standard cooperative agreement and the impact that the differences present that precluded use of a cooperative agreement. In addition, the justification did not state why the MCM-D Consortium required the retention of patent rights that would have precluded the use of a cooperative agreement.

Precision Laser Machining Consortium. "Other transaction" No. MDA972-94-3-0020 was for research on the use of laser machining tools. Although the justification stated why a contract or grant could not be used, the

[1]Four "other transactions" were issued under Section 845 of the National Defense Authorization Act for FY 1994 (Public Law 103-160) as a note to 10 U.S.C. 2371. Section 845, "Authority of the Defense Advanced Research Projects Agency to Carry Out Certain Prototype Projects," was used for known military requirements, and the determination and finding criteria were not applicable.

justification did not mention why a cooperative agreement was not feasible. The justification for the "other transaction" cited 10 U.S.C. 2371. The generalization does not satisfy the DDR&E guidance.

Adequate Justifications. The conflicting statements and generalizations were not adequate to demonstrate that the use of "other transactions" met the requirements of the Law and DDR&E interim guidance. We believe that the justifications need to clearly demonstrate the rationale why an "other transaction" was used as opposed to a cooperative agreement. Because the retention of patent rights is a major discriminator between cooperative agreements and "other transactions," the justification should, at a minimum, provide details on patent rights ownership and the reason that the non-Government participants would not have accepted a cooperative agreement.

Use of Cooperative Agreements. DARPA has extensively used "other transactions" as opposed to cooperative agreements. The General Accounting Office reported that from FYs 1990 through 1994, DARPA issued 56 "other transactions" (Appendix B). However, during the same period, the Navy and the Air Force issued no "other transactions" and 16 cooperative agreements.

At the time of the audit, "other transactions" were not governed by the DoDGARs that establishes management controls for grants and cooperative agreements. Because of the limited guidance for "other transactions," DARPA did not have management controls that are required with cooperative agreements. The DoDGARs management controls for cooperative agreements include an evaluation of the value of participants' contributions, the requirement to comply with generally accepted accounting principles, and a requirement for audits.

Proposal Reviews

We reviewed consortium cost proposals for "other transactions" and determined that DARPA officials did not adequately document the examination of the value of cost share contributions in the proposals. Of the 28 "other transactions" reviewed, DARPA officials could not provide adequate documentation to substantiate contribution cost analyses performed for 20 transactions. Four "other transactions" required no consortium contribution cost analysis because DARPA agreed to support all the research. One consortium contribution was all cash, and the remaining three "other transactions" had adequate documentation of the contribution cost analysis by DARPA. DARPA officials claimed that the proposed costs were examined for fairness and reasonableness; however, the officials could not provide supporting documentation of the analysis. In addition, DARPA had inadequate documentation for determining the values in consortium proposals for costs including labor hours and rates, facility use, equipment depreciation, subcontractors, special equipment, and costs associated with leases and IR&D. Our review of "other transactions" identified that:

o 87 percent did not have supporting documentation of contribution analysis,

o 93 percent did not have determinations of the value of in-kind contributions, and

o 86 percent did not have determinations of the value of IR&D contributions.

Appendix G summarizes the Government and consortium share of the "other transaction" proposed costs. Consortium contributions consist of cash, cash equivalents, in-kind contributions, and IR&D. Cash equivalent contributions consist of the labor effort of employees. In-kind contributions consist of labor efforts, lease use of buildings or equipment, acquisition cost of special equipment, and the value of goods and services. IR&D contributions are prior research efforts that the consortium believed to be useful to the planned effort. Appendix H details the types of "other transactions" contributions.

Consortium proposals did not identify how the values of the IR&D contributions were determined and whether the value was the cost of the research or its market value. DARPA files had no documentation to support the determination or verification of the value of proposed cash equivalents, in-kind contributions, or IR&D contributions. Documentation in the "other transaction" files usually contained a statement from the DARPA technical manager that the proposed costs appeared fair and reasonable for that effort; however, supporting documentation for the determination was unavailable. We believe that prudent business practices would require that DARPA officials document how their fair and reasonable determinations were derived. The research acquired through "other transactions" represents substantial investments of Government funds. Three examples of limited reviews of the value of consortium contributions follow.

Xerox Corporation. CMO established an "other transaction" with Xerox Corporation, No. MDA972-94-3-0023, to develop a manufacturing capability for liquid crystal displays. The "other transaction" was for $100 million with a 50-percent cost share between DARPA and Xerox. Xerox and its subcontractor were to contribute $50 million, consisting of cash equivalents of $37.2 million and in-kind contributions of $12.8 million. The cash equivalents consisted of labor and materials. The in-kind contributions included lease equivalents of capital assets, building lease costs, and depreciation charges for acquiring capital equipment. In-kind contributions also included lease equivalents of fully depreciated equipment and facilities, allocations of depreciation expenses for equipment and software use, and preexisting proprietary technology transfers. DARPA officials stated that the contributions were fair and reasonable and awarded the "other transaction" at the proposed costs. However, DARPA officials did not document how the cost estimates or the contributions were verified and valued.

Advanced Composites Technology Transfer/Bridge Infrastructure Renewal Consortium. The CMO established an "other transaction" with Advanced Composites Technology Transfer/Bridge Infrastructure Renewal Consortium,

No. MDA972-94-3-0030, for the development of composite bridge material for strengthening bridges in earthquake-prone areas. The consortium group submitted a cost proposal to DARPA with the consortium share of $10,509,761. The DARPA cost share was proposed as being $10,500,000, which is within the Law requirement that the Federal Government share will not exceed 50 percent whenever practical. The University of California, a consortium member, contribution share was $4,172,868, which represented 40 percent of the total consortium contribution. Included in the University of California's proposal was $839,832 from other Federal sources. Thus, the Government's actual cost share for the research was 54 percent. Further examination of the agreement files showed that DARPA officials knew that the Government contribution exceeded the statutory limit in violation of policy. Proposal documentation provided to DARPA clearly identified that the University contribution included other federally funded efforts. The consortium members' contributions also included the following items that were not examined by DARPA officials for proposed values and the reasonableness of the proposal: material expenditures, special equipment, fully burdened labor, lease values for facilities, market value of software, and the value of technology and data from the various consortium members. The limited DARPA review of proposed contributions for research effort resulted in the Government share exceeding the 50-percent limitation ratio required by the Law.

Fly-by-Light Advanced Systems Hardware Program. The CMO issued an "other transaction" to the Fly-by-Light Advanced Systems Hardware Program, No. MDA972-94-3-0014, for technology development to reduce the overall weight of military and commercial aircraft using fiber optics. The "other transaction" contributions were $12,325,060 from the team and $12 million from DARPA. The team contributions consisted of 91 percent IR&D and the remainder cash equivalents. The only documentation supporting a review of the consortium contributions was an analysis to determine whether the contributions were germane to the research effort. Government officials believed that the value of the IR&D contributions was the same as cash and, therefore, the IR&D contribution values were not verified.

Guidance for Evaluating Contributions. The CMO had not established policies or procedures to provide guidance for evaluating consortium contributions. Good business practices would require an examination and documentation of the methods used to verify the value of contributions proposed by the consortium members. The Office of Management and Budget Circular A-110 requires that contributions for cooperative agreements be formally reviewed for their value, and the Circular provides methods for conducting the evaluations. For example, the Circular provided that contributions in the form of personal property, equipment, building, land, and supplies should be valued at fair market value. In addition, the Circular states that assistance from other Federal agencies should not be used as non-Government contributions unless authorized. The CMO officials need to determine the value of contributions to prevent violation of the legal requirement that the Government cost share not exceed 50 percent, whenever practical. Although the Circular does not apply to "other transactions," the

principles in the Circular for determining the value of contributions should be adapted for "other transactions" because "other transactions" are similar to cooperative agreements.

Monitoring Cost

DARPA officials did not adequately monitor actual research costs associated with performance payable milestones, and as a result, excess funds had accumulated. Also, interest provisions for the excess funds were not included in "other transactions." As a result of the lack of an interest provision in "other transactions," interest payments to the U.S. Treasury were forfeited.

Performance Payable Milestones. The CMO officials and the consortia established performance payable milestones, based on estimated costs, at the time of the "other transactions" award. Upon completion of a performance payable milestone, the consortium would request payment from DARPA based on the cost-sharing ratio. Before payment, DARPA officials certify that the consortium satisfactorily accomplished the research performance milestone as outlined in the agreement. Excess funds occur when the milestone payments exceed the actual costs associated with the milestone event.

DARPA officials did not adequately monitor actual research related to performance payable milestones, did not adjust payable milestones, and therefore made payments that exceeded actual costs. The Government forfeited interest as a result of the lack of an interest provision in the agreement.

Interest Provision. Of the 28 "other transactions," 25 did not include an interest provision for submission of interest to the U.S. Treasury as required for grants and cooperative agreements (Appendix F). Provisions in grants and cooperative agreements required recipients to maintain appropriated funds in interest-bearing accounts and to submit the interest to the U.S. Treasury. We identified that 11 "other transactions" had excess funds. Of the 11 "other transactions," 2 consortia deposited the funds in interesting-bearing accounts, but only 1 of the 2 consortia submitted interest payments to the U.S. Treasury. The remaining nine consortia reportedly deposited the accumulated funds in non-interest-bearing accounts. We identified that about $1.9 million of interest will be forfeited because the "other transactions" did not contain an interest provision (Appendix I).

Examples of Cost Monitoring and Forfeited Interest. Two examples follow (Optical Imaging Systems, Incorporated, and Cray Research, Incorporated) of inadequate cost monitoring, the accumulation of excess funds, the absence of an interest provision, and the forfeiture of interest. Also discussed are two additional examples (Northeast Alternative Vehicle Consortium, Incorporated, and United States Display Consortium, Incorporated) that show how consortia maintained excess appropriated funds in interest-bearing accounts. In all four examples, the CMO officials did not include an interest provision in the "other transaction."

Optical Imaging Systems, Incorporated. The CMO officials issued an "other transaction" to the Optical Imaging Systems, Incorporated, No. MDA972-93-2-0016, to develop manufacturing technology for building active matrix liquid crystal displays. The $98.5 million effort required payments to Optical Imaging Systems, Incorporated, based on performance payable milestones during the research period. DARPA made consortium payments that resulted in payments exceeding actual costs. Accordingly, the consortium accumulated excess appropriated funds that ranged between $700,000 and $13 million over a 28-month period. Optical Imaging Systems, Incorporated, reportedly did not maintain the appropriated funds in an interest-bearing account because it was not required by the "other transaction" agreement. If the "other transaction" had required the deposit of appropriated funds in an interest-bearing account and payment to the Government, the U.S. Treasury would have received a payment of about $502,550.

Cray Research, Incorporated. The CMO issued an "other transaction" with Cray Research, Incorporated, No. MDA972-93-2-0017, for research, development, and demonstration of multi-chip modules for high performance computing systems. The 27-month research effort was valued at $25.5 million, with DARPA providing funding support of $7.4 million. The agreement provided for performance payable milestones. Cray Research, Incorporated, accumulated appropriated funds in excess of incurred costs that ranged between $660,000 and $5.3 million over a 23-month period with an average balance of $3 million. Because the agreement did not require excess funds to be deposited in an interest-bearing account, about $270,000 of interest was forfeited.

Northeast Alternative Vehicle Consortium, Incorporated. The CMO officials awarded an "other transaction" to Northeast Alternative Vehicle Consortium, Incorporated, No. MDA972-94-2-0005, for the development of an electric hybrid vehicle. The 24-month research effort was originally valued at $11.5 million and later increased to $26.1 million. The Government cost share was $4.1 million and $11.5 million, respectively. DARPA made payments to the consortium based on accomplished performance payable milestones. The lead consortium member, responsible for distributing appropriated funds, withheld payments to the consortium members because they did not complete subtasks. Northeast Alternative Vehicle Consortium, Incorporated, initially maintained the appropriated funds in a non-interest-bearing account; subsequently, the consortium transferred the funds to an interest-bearing account. At the time of the audit, the consortium was not required to submit the interest to the U.S. Treasury. Because the "other transaction" did not require appropriated funds to be deposited in an interest-bearing account, $103,000 of interest was forfeited.

United States Display Consortium, Incorporated. The CMO established an "other transaction" with United States Display Consortium, Incorporated, No. MDA972-93-2-0014, to develop and organize a United States-based manufacturing capability for high definition flat panel displays. United States Display Consortium, Incorporated, received milestone payments and accumulated excess funds ranging from $3 million to $5 million. The United States Display Consortium, Incorporated, maintained the appropriated funds in an interest-bearing account and submitted interest payments of

$272,000 to the U.S. Treasury. Although the CMO officials did not require the interest payment, the consortium believed there was a need to make the payment.

Need for Monitoring Cost. DARPA officials need to closely monitor actual cost and payments to consortia to preclude the unwarranted accumulation of excess appropriated funds related to actual costs. In addition, "other transactions" should contain a clause requiring the consortium to deposit appropriated funds into interest-bearing accounts and submit the interest to the U.S. Treasury. We are aware that guidance governing the use of "other transactions" is limited because they are new assistance instruments. However, we believe that the principles in the Office of Management and Budget Circular A-110 and "Interim Guidance on DoD Grant and Agreement Regulations," February 4, 1994, should be adapted to "other transactions."

Audits of "Other Transactions" Costs

The CMO officials included an audit clause in "other transactions," but DARPA officials intend to require audits only if they suspect fraud. However, without final cost audits, DARPA officials cannot ensure compliance with the statutory requirement that the Government cost share not exceed 50 percent, to the extent practical. Also, the audit clause in "other transactions" authorized audits by either Government agencies or public accounting firms on behalf of DARPA. The potential acquisition of non-Government audit services needs to be made in compliance with DoD Directive 7600.2 requirements for obtaining audit services.

Final Cost Audits. 10 U.S.C. 2371 provides that the Government cost share for "other transactions" will not exceed 50 percent, whenever practical. The CMO officials believe that cost audits are not necessary because consortium participants monitor the effort. DARPA believes that the consortium participants will monitor each other to ensure that each participant contributed the agreed-upon share, thus relieving the Government of the need to perform a final cost audit. However, because of the uncertainty of research efforts, the actual costs could deviate from cost estimates initially established. For the 28 "other transactions" reviewed, 4 agreements had a negotiated 50-percent cost share ratio between DARPA and the consortium. In addition, for 11 other agreements, DARPA negotiated a cost share ratio between 45 to 50 percent (Appendix G). If DARPA fully funds the research effort as agreed and actual cost variances occur, the cost share of DARPA will not match the agreed ratio with the consortium and, therefore, adjustments would be necessary. In addition, DARPA needs to conduct final cost audits to determine the actual cost of the research to ensure that its actual cost share ratio did not exceed the statutory limit.

Audits by Non-Government Representatives. The CMO officials included an audit provision in "other transactions" that allowed the potential use of non-Government auditors (public accounting firms). The potential acquisition of

non-Government audit services may not comply with DoD requirements for obtaining audit services. DoD Directive 7600.2, "Audit Policies," February 2, 1991, provides that DoD Components shall not contract for audit services unless the audit expertise is not available in DoD audit organizations. The directive requires prior approval from the Office of the Inspector General, DoD, before contracting for audit services. That policy was recently emphasized in an Inspector General, DoD, memorandum dated May 28, 1996, to the Military Departments, the Under Secretary of Defense for Acquisition and Technology, and the Under Secretary of Defense (Comptroller). The Inspector General issued the memorandum to ensure the appropriate use of non-Government auditors and compliance with applicable auditing standards. The Office of the Inspector General approval is required before releasing bidder solicitations for procuring audits from non-Government sources.

DARPA has not yet solicited or obtained non-Government audit services. However, DARPA was not familiar with the requirements of DoD Directive 7600.2. The Defense Contract Audit Agency is the primary contract audit agency for DoD, and has the expertise to audit proposed and actual cost in "other transactions." Because DARPA has already included audit provisions in "other transactions," DARPA should meet with representatives of the Inspector General, DoD, to determine the appropriateness of the audit clause and actions that should be taken concerning audit of existing "other transactions" and how audits of future "other transactions" will be handled.

Other Transactions and DoD Contractors

Congress authorized the use of "other transactions" to increase involvement in DoD programs by commercial firms that traditionally have not entered into contracts or agreements with the DoD. DoD officials requested the authority to stimulate or support research and development by commercial firms and consortia that were believed to be reluctant to conduct research for DoD because they would be subject to the FAR and DoD procurement regulations. Congress authorized the use of "other transactions" and allowed DoD officials a considerable degree of flexibility in negotiating terms and conditions. The intent of "other transactions" was to obtain research from traditionally non-DoD commercial firms and to capitalize on commercial firms' research investments. Traditional DoD contractors were participants in 16 of 28 "other transactions" consortia agreements (Appendix J). The traditional DoD contractors included Boeing Company (Defense and Space Group), McDonnell Douglas Corporation, Raytheon Company (Missile Systems Division), and United Technologies Corporation (Pratt & Whitney Division, Government Engines and Space Propulsion) as participants with non-traditional DoD firms.

Summary

The CMO officials did not adequately document the justification for the use of "other transactions" to clearly demonstrate that the use of those instruments met the requirements of the Law and DDR&E interim guidance. In addition, DARPA officials did not provide adequate documentation to support contribution analysis and determine the value of cash equivalent, in-kind, and IR&D. Further, as a result of using scheduled milestone payments and not monitoring actual costs, consortium members accumulated excess appropriated funds. Finally, "other transactions" did not contain a provision that required the deposit of appropriated funds in an interest-bearing account and submission of interest to the U.S. Treasury.

In a February 8, 1994, memorandum, the Director of Defense Research and Engineering urged the use of "other transactions" and requested suggestions and recommendations to improve the guidance. In addition, the Director stated that grants, cooperative agreements, and "other transactions," if used appropriately, could be valuable tools in acquiring research. We agree that the instruments provide valuable tools when appropriately used. We believe that the recommendations in this finding are good business practices and are in keeping with the Director's memorandum in suggesting ways to improve the guidance for the use of "other transactions."

Recommendations, Management Comments, and Audit Response

C.1. We recommend that the Director of Defense Research and Engineering issue guidance for awarding and administering "other transactions" that:

a. Requires the awarding agency to document evaluations of cash equivalents, in-kind contributions, and independent research and development costs contributions in research proposals. The documentation should detail how the value of cash equivalents, in-kind contributions, and independent research and development values were determined to be fair and reasonable.

b. Requires contracting officers to monitor actual cost at performance payable milestones and adjust payments when appropriated funds are in excess of actual costs.

c. Requires that the contracting officer incorporate an agreement clause that provides for the consortium to place appropriated funds in an interest-bearing account and submit the interest to the U.S. Treasury, making annual notification of the interest payments to the awarding agency.

Management Comments. The DDR&E concurred and is revising the DoDGARs to require the documentation and monitoring. The Director plans to complete the actions in late 1997.

d. Requires that the contracting office incorporate an audit clause that allows DoD or its representative the right to audit the cost associated with research efforts.

Management Comments. DDR&E partially concurred. DDR&E agrees with including a clause giving DoD or its representative access to recipient records that account for the Federal funds and recipient funds spent on the project. However, the intent of "other transactions" is to involve commercial firms that traditionally have not entered Government contracts because of Government-unique requirements. Consistent with that intent, using alternative approaches may be necessary to ensure proper use of project funds. For example, the recipient's independent auditor might be given access to the recipients records pertinent to the project for the purpose of the audit.

Audit Response. Management comments show the correct intent but a lack of appreciation for the audit issue. Use of the for-profit company's independent auditor to examine the cost on a specific project for DoD is a potential conflict of interest. An independent auditor used by a for-profit company to audit company records cannot, at present, also be hired by DoD to report independently to DoD on how the company spent DoD funds. This situation creates a potential conflict of interest. In addition, companies who compete in the market place have combined their efforts as research participants in an "other transaction" consortium arrangement. Under this situation, it is also questionable whether the companies would allow the independent auditor of one company to examine the associated research cost of the other competing company. The avoidance of these potential conflicts of interests is but one of many reasons why DCAA exists. Further, the use of many traditional for-profit DoD contractors in "other transactions" and the fact that DCAA is already located at the contractor is a good reason for DARPA to consider use of DCAA. After having authority for 4 years for "other transactions," DDR&E needs to address the audit issue. We are willing to work with DDR&E on this issue. We request additional management comments to this recommendation.

e. Requires final cost audits. The audits should include an examination of the research cost in relation to the cost share ratio established in the agreement.

Management Comments. DDR&E partially concurred. DDR&E stated that procedures should be established to ensure that recipients contribute their agreed-upon funding amounts, but does not concur with routinely requiring final cost audits. DDR&E stated that alternative procedures could be used, including reviewing expenditures at payable milestones and reviewing of financial reports. DDR&E stated that if acquisition officials had reasonable assurance that recipients have management systems and internal controls to ensure compliance with Federal requirements, including cost sharing, the acquisition officials would not need to require routine final cost audits of individual awards.

Audit Response. Management comments are partially responsive. We believe that "other transactions" are cost type instruments, as opposed to fixed priced, because of the cost share characteristics and the statutory requirement that the Government's cost share will be no greater than 50 percent if practicable. To ensure compliance with the cost share and statutory requirement, some form of final cost review is necessary. Alternative procedures that DDR&E suggested, which are the use of expenditure and financial reports, may satisfy the requirement; however, those procedures will not satisfy every situation, and at times, the reported cost will need to be verified to the original records.

Our examination showed that 20 of the sampled 28 "other transactions" were with consortium entities established to facilitate agreements with DARPA and to provide administrative support to the research participants. As a result, the consortium may not have the management systems or internal controls to make the proposed alternatives a viable approach. Through the consortium arrangement, the research participants submit reports to the consortium for submission to DARPA, and the consortium depends upon the research participants' reports to be accurate. In a related issue, it is unclear whether an audit provision in an "other transaction" is limited to the established consortium or whether the audit provision flows down to the research participants. We are willing to work with DDR&E on this issue; however, the lack of cost verification on the "other transactions" reviewed shows there is much work needed on this issue. We request additional comments on this recommendation.

f. Emphasizes compliance with DoD Directive 7600.2, "Audit Policies," February 2, 1991, to coordinate with the Inspector General, DoD, on audits of "other transactions."

Management Comments. DDR&E concurred and stated that guidance will be provided to ensure compliance with DoD Directive 7600.2; however, the guidance will not require approval from the Inspector General, DoD, if the audit of the specific award is performed by the same independent auditor that audits the financial statements. Also, the guidance will not require approval when a "single audit" provides reasonable assurance that the recipient has the management control systems to assure compliance with Federal laws and regulations.

Audit Response. Management comments are partially responsive to the recommendation. As stated in the audit response to Recommendation C.1.d., DDR&E comments show a lack of appreciation for the audit issue. A potential conflict of interest would exist if the same independent auditor that examines the financial statement of a for-profit company also examines a specific "other transaction" for DoD. DDR&E comments also misuse the "single audit" concept. A "single audit" applies to the situation when a single Government agency has the oversight responsibility for a university or not-for-profit agency and one audit is performed. The Government auditors have the right to perform the audit or review how an independent audit firm performs the audit. We request additional comments to the final report that address these issues.

C.2. We recommend that the Director, Defense Advanced Research Projects Agency, establish performance measures for contracting management officials for "other transactions" to include monitoring costs, include an interest provision in agreements, and provide documented evaluations of the value of non-Government contributions.

Management Comments. DARPA concurred and stated that it would establish performance measures by August 31, 1997.

C.3. We recommend that the Director, Contracts Management Office, Defense Advanced Research Projects Agency:

a. Develop procedures to comply with the Director of Defense Research and Engineering selection guidance by establishing written policy and procedures that require detailed documented justifications in the use of "other transactions," including specific reasons why other types of actions were not feasible.

Management Comments. DARPA concurred and stated that it will work with DDR&E to develop written policy and procedures for justifying the use of "other transactions" by December 31, 1997. DARPA also stated that it disagrees that "other transactions" should be used only as a last resort, and recent statute wording supports its position.

b. Require contracting officers to review all "other transactions" to determine whether Government appropriated funds were deposited in interest-bearing accounts. For those "other transactions" that earned interest from appropriated funds, request that the interest be submitted to the U.S. Treasury and have the interest payments reported to the Defense Advanced Research Projects Agency.

Management Comments. DARPA partially concurred with the recommendation. DARPA stated that the only "other transactions" that required recipients to return interest were those that incorporated the interest clause. DARPA will task agreement administrators to determine whether appropriated funds were deposited in interest-bearing accounts and checks submitted to the U.S. Treasury for those agreements that have the interest clause.

Audit Response. Management comments are partially responsive in that DARPA will review agreements with an interest-bearing clause. However, DARPA was providing appropriated funds that were not needed to achieve the technical performance milestone, and the research participants were, in some cases, depositing the excess funds in interest-bearing accounts. We do not believe that research participants should financially benefit by retaining the interest earned on the excess DARPA payments associated with achieving the performance payable milestones. We believe that DARPA needs to review all "other transactions" to determine whether research participants have financially benefitted from depositing excess payments in interest-bearing accounts. Therefore, we request DARPA to reconsider its position on reviewing all "other transactions" to determine whether appropriated funds were deposited in interest-bearing accounts.

c. Require contracting officers to modify all existing "other transactions" to ensure that appropriated funds are maintained in an interest-bearing account, submit interest earned from appropriated funds to the U.S. Treasury, and report the interest payment to the Defense Advanced Research Projects Agency.

Management Comments. DARPA partially concurred with the recommendation, stating that it has incorporated interest clauses in "other transactions" since July 1996. The prospect of researchers earning interest conflicts with the performance payable milestone concept. DARPA stated that in the interest of good cash management, agreement administrators will revisit their "other transactions" over the interest issue.

Audit Response. The recommendation was to modify existing "other transactions" to incorporate an interest provision to preclude any further forfeiture of interest. As identified in Appendix I, 11 of 28 (40 percent) of the "other transactions" had excess DARPA payments. A payment schedule (performance payable milestones) established before the initiation of research does not always resemble the actual research progress cost. DARPA comments did not adequately address the recommendation as it applies to existing "other transactions." Therefore, we request additional management comments.

d. Request the Northeast Alternative Vehicle Consortium, Incorporated, to submit interest earned from appropriated funds to the U.S. Treasury and report the interest payment to the Defense Advanced Research Projects Agency.

Management Comments. DARPA concurred with the recommendation, stating that an interest provision was incorporated in the agreement, and DARPA officials will monitor potential interest payments as work continues.

Audit Response. Although the Northeast Alternative Vehicle Consortium, Incorporated, agreement was modified to incorporate the interest provision for any future interest, the DARPA comments did not address the interest that the Consortium earned on the appropriated funds. We request additional comments that specifically address when DARPA will request a refund of the interest.

e. Initiate action to obtain approval from the Office of the Inspector General, DoD, as required by DoD Directive 7600.2, "Audit Policies," February 2, 1991, of the audit clauses included in "other transactions" that allow an audit by an independent accounting firm. Approval should also include the audit clauses in existing "other transaction" agreements.

Management Comments. DARPA partially concurred with the recommendation, stating that it will coordinate with the Inspector General, DoD, when DARPA directly contracts for an independent auditor or requires the recipient to hire an independent auditor to conduct an award-specific audit on behalf of the Government. However, DARPA believes that coordination should not be necessary if an independent auditor, who audits the recipients financial statements, performs a "single audit." A "single audit" would be an expansion of the financial statement audit to include a review of the internal

control structure to ensure that the recipient manages Federal awards in compliance with Federal laws and regulations and with the terms and conditions of the awards.

Audit Response. A financial statement audit already requires a review of the management control structure. Further, the for-profit contractor's independent financial auditors are precluded by potential conflict of interest from providing any specific information to DARPA. At present, they cannot be used by DARPA on reviews of "other transactions." DARPA's comments show a lack of understanding of this audit issue. The response to the recommendation is directly related to comments provided by DDR&E to Recommendations C.1.d. and C.1.f. and the apparent conflict of interest issue. Because Recommendations C.1.d. and C.1.f. require additional management comments from DDR&E concerning the potential conflict of interest issue and policy decisions, no additional comments from DARPA on the recommendation are required.

Finding D. Acquisition Management Control System

Contracts Management Office (CMO) did not adequately establish, assess, test, correct, and report on management controls. This occurred because the management control program requirements were not followed and the importance of management controls did not receive appropriate emphasis. As a result, DARPA management was not aware of the management and cost problems related to contracts, grants, and "other transactions."

Management Control Policy

The Office of Management and Budget revised management control guidance in June 1995. During this audit, DoD officials revised the management control directive and drafted a corresponding instruction. DARPA officials responsible for the agency's management control program indicated that they have no plans to develop a new program as a result of management control policy revisions. This report discusses both the revised guidance and the previous guidance because we performed the audit primarily when DARPA was using the previous guidance. However, we considered the new guidance when making our recommendations for corrective actions.

Office of Management and Budget Circular A-123, Revised, "Management Accountability and Control," June 21, 1995, replaced Office of Management and Budget Circular A-123, Revised, "Internal Control Systems," August 4, 1986, and Office of Management and Budget "Internal Control Guidelines," December 1982. The new circular does not require agencies to institute a separate management control process and gives agencies the discretion to determine what procedures to use in establishing, assessing, correcting, and reporting on management controls. The circular requires agencies to adequately document management control procedures and states:

> Agencies and individual Federal managers must take systematic and proactive measures to (i) develop and implement appropriate, cost-effective management controls for results-oriented management; (ii) assess the adequacy of management controls in Federal programs and operations; (iii) identify needed improvements; (iv) take corresponding corrective action; and (v) report annually on management controls.

DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended. During the audit, DoD officials were revising the directive and drafting a corresponding instruction, and DoD organizations were instructed to use the draft directive and instruction as guides for FY 1996

program execution.[2] The draft guidance requires the continuous monitoring of management controls and does not change management's responsibility to design management structures that help ensure accountability for results and to include appropriate, cost-effective management controls. Management control objectives include executing functions properly; avoiding fraud, waste, and mismanagement; safeguarding assets; accounting for revenues and expenditures properly; and complying with laws and regulations.

DARPA Administrative Instruction No. 37, "DARPA Management Controls," June 25, 1992, assigns responsibility and accountability for effective management controls. The instruction requires the establishment and operation of a management control system to provide DARPA management reasonable assurance that agency officials comply with regulations, policies, and procedures in the execution of their duties. The instruction requires CMO management to conduct vulnerability assessments and management control reviews, test management controls, and report material management control weaknesses to DARPA management as part of implementing the DARPA management control program. To implement policies in DARPA Administrative Instruction No. 37, DARPA management issued DARPA Administrative Instruction No. 37.1-H, "Handbook on the Conduct of Vulnerability Assessments," July 10, 1992, and DARPA Administrative Instruction No. 37.2-H, "Handbook on the Conduct of Management Reviews," June 24, 1992.

Establishing and Implementing CMO Management Controls

CMO management did not establish and implement effective and efficient management controls. DARPA Administrative Instruction No. 37 requires CMO management to establish management controls. Management controls are the regulations, policies, and procedures that CMO management uses to ensure that what should occur in daily operations does occur. Management controls should be effective and efficient.

Effectiveness. CMO management emphasized policy requirements but did not develop effective procedures for determining compliance with the policy. To be effective, procedures should be operating and should fulfill a purpose. Examples of ineffective management controls over contracts, grants, and "other transactions" are shown below.

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[2]DoD Directive 5010.38 has been revised as "Management Control (MC) Program," August 26, 1996. Also, DoD officials issued an accompanying instruction, DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996. The audit was performed under the April 1987 version of the directive; however, the issues in this finding were not affected by the revised guidance.

Contracts. The 1992 CMO vulnerability assessment included two controls, a COTR manual and contracting officers' Acquisition Corps certification, that did not exist. As of April 23, 1996, the COTR manual still did not exist. In response a 1990 Procurement Management Review (PMR), CMO management planned to develop and issue a COTR manual. In response to the 1993 PMR, CMO management planned to certify contracting officers under the Acquisition Corps certification program. Even though those procedures did not exist, CMO management included them on a list of management controls submitted with the vulnerability assessment in August 1992. According to CMO management, the COTR manual was overcome by events and was never issued. Contracting officers became certified Acquisition Corps members between September 1994 and July 1995, 2 years after CMO management claimed that the management controls existed. Listing nonexistent procedures as management controls does not constitute adequate management controls.

Grants. CMO management did not establish procedures to obtain reasonable assurance of compliance with Office of Management and Budget requirements. Office of Management and Budget Circular A-110 requires that grantee qualifications be examined before issuing the grant, advances kept to a minimum, and appropriated funds placed in an interest-bearing accounts and interest submitted to the U.S. Treasury. Examples of effective procedures, as discussed in Finding B, include verifying grantee qualifications, examining the need for advanced funds, and verifying that funds are maintained in interest-bearing accounts and interest payments are submitted.

Other Transactions. CMO management did not establish procedures to obtain reasonable assurance of complying with the Law requirements for "other transactions." The 10 U.S.C. 2371 requires that the Government share will not exceed 50 percent, whenever practical. Under "other transactions," the Government contributes cash while consortium members contribute cash, cash equivalents, in-kind contributions, and independent research and development contributions. An effective procedure for obtaining reasonable assurance that Government funding does not exceed the required amount is to verify the value of consortium members' contributions. As discussed in Finding C, DARPA did not evaluate the fair value of noncash contributions.

Efficiency. To be efficient, managers should design procedures to obtain maximum benefit with minimum effort. CMO established controls to ensure compliance with some policies. However, those controls could be more efficient and make more productive use of existing DARPA resources. Examples of opportunities for DARPA to improve efficiency of controls are shown below for precontract cost and contract closeout.

Precontract Cost. DARPA management established a review process to limit precontract cost as a result of the 1991 Inspector General, DoD, inspection report (Appendix B). The Deputy Director, Management, and the DARPA Comptroller (senior DARPA officials) were required to review and deny unjustified early start requests. Although reviews are valid management controls, they are not the most efficient use of those senior officials' time. A

more efficient procedure is for the CMO senior officials to verify the validity of early start requests or to have the senior DARPA officials review and approve or deny those precontract costs that exceed a designated dollar threshold.

Contract Closeout. CMO management awarded a contract for the identification and closure of overage contracts. Overage contracts are physically complete contracts that have not been closed within established timeframes. The contractor created a data base, which identified about 500 overage contracts. The data base, created in response to the 1993 PMR, was a valid management control. However, CMO management required the contractor to include in the data base only those contracts that were issued. CMO officials stated that they wanted to focus on closing existing overage contracts before the funds expire. Closing contracts before funds expire and become unavailable for use is a valid concern. However, CMO management also needs to keep subsequent contracts from becoming overage. A more efficient management control would be to input all contracts into the data base while closing the old contracts. The data base can then be used to track the age of contracts and take prompt action to prevent future overage contracts.

We are not making recommendations to change the precontract cost and contract closeout actions because they are internal detail procedures and are discussed as examples for which management could establish more efficient internal processes.

Assessing CMO Management Controls

CMO management did not adequately assess management controls. As a result, CMO management did not identify the material management control weaknesses identified by this audit. DARPA Administrative Instruction No. 37 requires CMO management to assess management controls by conducting vulnerability assessments and management control reviews.

Vulnerability Assessments. CMO management did not adequately document data supporting the vulnerability assessment. DARPA Administrative Instruction No. 37.1-H defines a vulnerability assessment as a structured, educated diagnosis by a management control manager (in this case, CMO management) of the organization's inherent susceptibility to mismanagement, erroneous reports or data, unauthorized uses of resources, illegal or unethical acts, or adverse or unfavorable public opinion. The handbook requires CMO management to conduct the vulnerability assessment using a checklist prepared by DARPA management. The handbook states that the DARPA checklist provides adequate minimum documentation including a record of the final decision and should include data to support the risk rating.

Data supporting the vulnerability assessment were not adequate for substantiating the medium risk rating in CMO because the data were generic to all of DARPA. The data did not include a written evaluation showing the identification and evaluation of differences between awarding and administering

contracts, grants, cooperative agreements, and "other transactions." CMO management stated that it identified and evaluated preaward, award, and postaward functional areas, which apply to all acquisition and assistance instruments issued by the CMO. Despite the evaluation by CMO management, we identified material management control weaknesses such as the accumulation of appropriated funds exceeding amounts needed during the research efforts (Findings B and C).

Management Control Reviews. CMO management used a 1993 PMR that was limited in scope as an alternative management control review. DARPA Administrative Instruction No. 37.2-H states that a management control review is a detailed examination of a management control system to determine the adequacy and implementation of management controls. A management control review conducted by CMO management should include testing to determine whether management controls operate as intended. Management control policy encourages the use of financial systems reviews or Inspector General and General Accounting Office audits as alternative management control reviews. Instruction No. 37.2-H allows the use of an external review when the review addresses overall compliance with management control objectives, includes management control testing, and is fully documented.

CMO management use of the 1993 PMR as the sole management control review was improper because the review was limited in determining overall compliance with management control objectives related to grants and "other transactions." Although the PMR reviewed preaward, award, and postaward functions, the review focused primarily on contracts. The PMR scope specifically stated its limitations in reviewing grants, cooperative agreements, and "other transactions." Because CMO management was responsible for issuing grants, cooperative agreements, and "other transactions," CMO management should have conducted a supplemental review of those assistance instruments. Examinations of grants, cooperative agreements, and "other transactions" were necessary because each instrument had different regulations and policies governing its issuance. The conditions cited in this report for grants (Finding B) and "other transactions" (Finding C) illustrate the consequences of management control weaknesses.

Testing CMO Management Controls

CMO management did not periodically test acquisition management controls to determine whether the controls operated as intended. Testing management controls is an essential part of management's self assessment. CMO management stated that it did not test management controls because it believed that oversight provided by the General Accounting Office; the Inspector General, DoD; and the Defense Logistics Agency provided adequate testing of management controls. External reviews do not relieve management of the responsibility to test management controls. And, as previously described, the scope of external reviews can be limited.

For example, none of the prior audits and other reviews discussed in Appendix B tested management controls over grants, cooperative agreements, and "other transactions." Accordingly, CMO management should have initiated testing of management controls over those assistance instruments and should have documented in CMO management control files the results of the tests. Management control testing is necessary because the testing determines the effectiveness of controls. Testing the management controls identifies weaknesses, which can then be strengthened, and is a basic management control function. The decision not to test management controls precluded CMO management from identifying and correcting the management control weaknesses discussed in this report.

Correcting CMO Management Control Weaknesses

CMO management took corrective actions to correct weaknesses identified by the 1993 PMR and the Inspector General, DoD, inspection. However, DARPA did not test the corrective actions to determine whether the actions were complied with. The 1993 PMR made 39 recommendations to improve CMO operations. In response, CMO management established new policy and emphasized existing policy and procedures to correct the deficiencies. However, some of the corrective actions were not sufficient because CMO management did not enforce compliance. For example, we identified noncompliance with policies and procedures established for cost analyses of contractor proposals and precontract costs (Finding A). Because CMO management did not test corrective actions, it was unaware that contracting officers did not comply with established policy and procedures.

Reporting CMO Management Control Weaknesses

CMO management did not adequately report material management control weaknesses to DARPA management. The previous version of DoD Directive 5010.38 and the new DoD Instruction 5010.40, August 28, 1996, require the annual statement of assurance to mention uncorrected material weaknesses. According to DARPA Administrative Instruction No. 37.1-H, CMO management is responsible for evaluating management controls and for providing an annual statement of assurance to DARPA management. DARPA prepares the annual statement of assurance based on reports from individual offices including CMO. CMO management reported two material management control weaknesses and four recommendations related to repeat findings identified by the 1993 PMR in the FY 1993 report to DARPA management. However, CMO management did not adequately determine which recommendations represented material management control weaknesses. In addition, CMO management did not report uncorrected material weaknesses in the FYs 1994 and 1995 reports to DARPA management, and DARPA management did not report CMO uncorrected material weaknesses in the

FYs 1994 and 1995 annual statements of assurance. CMO management did not implement corrective actions for many of the weaknesses until FYs 1995 and 1996 and should have continued to report the material management control weaknesses.

In addition to identifying material management control weaknesses similar to those reported to DARPA management in FY 1993, this audit report identifies weaknesses not detected by CMO management for grants and "other transactions."

Conclusion

Effective and efficient management controls are necessary for obtaining reasonable assurance that CMO operates as intended. DARPA needs to improve management controls over cost analyses, COTR responsibilities, advance planning, and payment methods for grants and "other transactions." In addition, management controls are essential when unique assistance instruments such as "other transactions" are used. Because of limited guidance in the use of "other transactions," CMO management needs to use sound business practice and establish management controls to provide reasonable assurance of safeguarding the Government's interests.

Management Comments on the Finding

DARPA stated it accepts the specific criticisms but not the generalized assertions in the management control finding. DARPA also stated that it emphasizes cost-effective management controls and reasonable assurance, not air-tight controls and absolute assurance.

Audit Response

Based on DARPA comments, we revised the tone of the finding paragraph. Through management controls and system tests, management determines where management attention should be directed. Our review of the acquisition management control system identified that CMO management did not have an effective program to ensure implementation of needed corrective actions. Issues discussed in the contracting finding are repeat problem areas reported in the 1990 and 1993 PMRs and the 1991 Inspector General, DoD, inspection report. In those three previous reports, as in this report, DARPA concurred with the recommendations and stated that it would establish policies and procedures as corrective action. However, the establishment of policies and procedures does

not represent corrective action; corrective action is achieved through compliance with the established polices and procedures. DARPA needs an aggressive approach to correct identified and repeated problems.

Recommendations, Management Comments, and Audit Response

D.1. We recommend that the Director, Defense Advanced Research Projects Agency, revise Defense Advanced Research Projects Agency Administrative Instruction No. 37 to:

a. Clearly emphasize that the agency's unique mission increases the need for strong management controls.

Management Comments. DARPA partially concurred and planned to use the new Office of Management and Budget guidance to review and revise, as necessary, DARPA Administrative Instruction No. 37. The review and revision would be accomplished by September 30, 1997.

Audit Response. The proposed alternative action is responsive to the intent of the recommendation. No further comments are required.

b. Direct managers to:

(1) Document the evaluations supporting vulnerability assessments.

(2) Document evaluations of the scope and extent of external reviews before using them as alternate management control reviews.

(3) Conduct supplemental management control reviews when the scope of external reviews is limited.

Management Comments. DARPA partially concurred. DARPA comments state that providing additional documentation on vulnerability assessments and external reviews used as alternative management controls evaluation is contrary to the new Office of Management and Budget guidance. The new Office of Management and Budget guidance stresses continuous monitoring, not periodic reviews and control exercises.

Audit Response. DARPA comments are nonresponsive. The new Office of Management and Budget guidance stresses continuous monitoring and periodic evaluations. The DARPA acquisition management control documentation that we examined to support the DARPA vulnerability assessment was limited to a checklist and limited supporting documentation. In addition, CMO had no documentation of the evaluation of external reviews that CMO used as an alternative to conducting its examinations. The external reviews did not include grants and "other transactions," which, along with contracts, are the

three instruments used to obtain research efforts. The use of the alternative reviews as the management control assessment by CMO was inappropriate because they were used exclusively to support the CMO acquisition management control system. This finding is not new; the lack of an effective management control system was identified in the 1991 Inspector General, DoD, inspection report. The new Office of Management and Budget guidance does require management to document its assessment of alternative reviews if they are used as part of the management control system. We request that management reconsider its response to Recommendation D.1.b. and provide additional comments on the final report.

D.2. We recommend that the Director, Contracts Management Office, Defense Advanced Research Projects Agency:

a. Develop and implement a written plan for identifying and evaluating Contracts Management Office functional areas such as the issuance and administration of contracts, grants, cooperative agreements, and "other transactions" for future management control reviews.

Management Comments. DARPA concurred, stating that it plans to develop the plan by December 31, 1997.

b. Test acquisition management controls and document in Contracts Management Office management control files the results of the tests.

Management Comments. DARPA concurred, stating that it will perform tests to the extent that resources and time in FY 1997 allow. DARPA stated that emphasis will be on cost-effective management controls and providing quality acquisition service to its technical clients.

Audit Response. An effective acquisition management program is not a one-time review. Providing an effective acquisition management program is an ongoing responsibility. Management tests of compliance with established policies and procedures and taking corrective action are also methods of ensuring quality acquisition services to clients. We request additional comments on how DARPA will implement the written management control plan referenced in Recommendation D.2.a. and how it will document the results of the tests.

c. Test corrective actions taken in response to external reviews to verify that desired results are achieved.

Management Comments. DARPA concurred and stated that within the constraints of a small staff and large workload, DARPA will test corrective actions by December 31, 1997.

Audit Response. DARPA's comments do not address the issue. When staffs are decreasing, risk increases and strong management controls are needed. Further, maintenance of and testing of management controls can and should

involve all employees. Thus, a small staff is not a constraint. This finding is a repeat finding from the 1991 Inspector General, DoD, inspection report. In response to the Inspector General report, DARPA stated:

> . . . limited manpower resources, has resulted in a policy of testing by exception. The absence of substantive vulnerability problems coupled with the decreasing DoD authorizations make this an efficient practice. Although DARPA does not believe it necessary to test vulnerability assessment, this recommendation is now being implemented to the extent permitted by manpower ceilings.

We believe that the results of this audit provide DARPA management the identification that vulnerability problems still exist and that the limited efforts taken since the 1991 inspection report had not been effective. DARPA is a creative organization. As such, it should establish a creative approach with limited resources to test management controls. One alternative would be an integrated process team approach that involves all the CMO staff in testing corrective actions. We request additional management comments that identify management actions to ensure that DARPA achieves corrective actions.

Part II - Additional Information

Appendix A. Scope and Methodology

Scope

We performed the audit from May 1995 through October 1996. To accomplish the audit objective, we reviewed 18 contracts, valued at $368.4 million; 15 grants, valued at $1 billion; 1 cooperative agreement, valued at $4.2 million; and 28 "other transactions," valued at $1.2 billion, that were issued or modified by DARPA during FY 1993, FY 1994, and the first 6 months of FY 1995. We did not review the merits of selecting research projects because of the scientific nature of the research efforts. We examined the process of selecting contractors to receive contracts, grants, cooperative agreements, and "other transactions" and the management and administration of those instruments. Appendix C identifies the contracts and assistance instruments reviewed.

The audit initially included research efforts issued by the Military Departments and DARPA. However, because of the scope of the review, the review concentrated on actions issued by DARPA.

Methodology

We reviewed policies and procedures used to select, award, and administer research projects at DARPA; examined selected acquisition files, and conducted interviews. Specifically, we:

o reviewed research and development contracting policies and procedures;

o reviewed DARPA contracts, grants, cooperative agreements, and "other transactions" and associated files and correspondence dated December 4, 1987, to March 15, 1996;

o interviewed DARPA technical managers and contract and grants officers; and

o interviewed administrative contracting officers.

Use of Computer-Processed Data. We relied on computer-processed data from the DARPA contract management data base without testing the systems

general and application controls to confirm the reliability of the data. However, in selecting the sampled items for audit, we did not identify any inaccuracies in the information obtained from the DARPA data base.

Audit Period and Standards. We performed this economy and efficiency audit in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. We included tests of management controls considered necessary.

Organizations and Individuals Visited or Contacted

We visited or contacted individuals and organizations within the DoD and Auburn University, Lockheed Aircraft Corporation, Massachusetts Institute of Technology, MicroModule Systems, National Center for Manufacturing Sciences, Robert C. Byrd Institute, Spokane Intercollegiate Research and Technology Institute, Tera Computer Company, Tektronix Corporation, University of California at San Diego, and Washington State Auditors Office. Further details of organizations visited are available on request.

Management Control Program

DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of Management Control Program. Inspector General, DoD, Report No. 96-064, "Implementation of the DoD Management Control Program Within Special Access Programs," February 2, 1996, (Appendix B) evaluated the overall DARPA management control program. The Inspector General audit found that DARPA had followed the Office of Management and Budget and DoD guidance and procedures when executing the management control program. Therefore, we limited our review to the CMO implementation of the DARPA management control program.

Adequacy of Management Controls. We identified material management control weaknesses in the award and administration of contracts and "other transactions." Recommendations A.1., B.1., C.1.a. through C.1.e., and C.2. will correct the identified weaknesses. Also, DARPA guidance on implementing an effective management control program needs improvement. Recommendation D.1. will correct the weakness.

CMO also needs to strengthen implementation of its internal policies in issuing and administering contracts, grants, and "other transactions." Recommendations A.2.d., B.2.g., B.2.h., C.3.a., and D.2. will correct the

identified weaknesses. The recommendations could result in future potential benefits but we could not determine the amount (Appendix L). A copy of the report will be provided to the senior official responsible for management controls in DARPA.

Appendix B. Summary of Prior Audits and Other Reviews

During the last 5 years, four reports have been issued related to DARPA. The General Accounting Office issued a report discussing nontraditional instruments that DARPA used to acquire research. The Inspector General, DoD, issued two reports, one discussing the DARPA management control program and one addressing the DARPA selection, award, and administration of contractual transactions. The Defense Logistics Agency issued a PMR that discusses the DARPA selection, award, and administration of contractual transactions.

General Accounting Office

National Security and International Affairs Division 96-11 (OSD Case No. 1074), "DoD Research, Acquiring Research by Nontraditional Means," was issued March 29, 1996. The report states that cooperative agreements and "other transactions" appear to have contributed to reducing some barriers between the Defense and civilian industrial bases and to fostering new relationships and practices within the Defense industry. The General Accounting Office believed that cooperative agreements and "other transaction" agreements provided DoD a tool for benefiting from the private sector's technological knowledge and financial investments in researching and developing commercial products and processes.

The report identifies two issues concerning the selection and structure of cooperative agreements and "other transactions." The General Accounting Office concluded that DARPA and the Military Departments have not been consistent in selecting the type of instrument to be used, which led to confusion among firms that negotiated agreements with both DARPA and the Military Departments. In addition, the General Accounting Office believed that accepting the value of prior research in lieu of financial or in-kind contributions may not accurately represent the relative financial contributions of the parties under the agreement.

The report recommended that the Secretary of Defense ensure that revised guidance on the use of cooperative agreements and "other transactions" promote increased consistency among DoD Components on the selection and structure of the instruments. The report also recommended that the guidance specifically address the extent that the value of prior research should be accepted as part of a participant's cost-sharing contribution.

DoD generally concurred with the findings and recommendations. DoD agreed that the instruments, if used appropriately, could be valuable tools that help DoD take advantage of technology development in the commercial sector. DoD stated that it would issue additional guidance; however, at the time` of this audit the guidance was not issued.

Inspector General, DoD

Inspector General, DoD, Report No. 96-064, "Implementation of the DoD Management Control Program Within Special Access Programs," February 2, 1996, states that DARPA followed Office of Management and Budget and DoD guidance and procedures when executing the management control program. The report also discusses implementation of the DARPA management control program by two technical offices that manage special access programs. The report concludes that DARPA managers did not understand how to analyze event cycles and how to combine control objectives and techniques into a meaningful management control review. Report No. 96-064 did not make recommendations to DARPA because DoD was revising management control policy.

Inspector General, DoD, Report No. 91-INS-05, "Report on DARPA," was issued March 15, 1991. The inspection addresses the effectiveness of DARPA oversight and management controls and compliance with laws, Federal regulations, and DoD policy and procedures. The inspection determined that contracts management and oversight procedures did not fully meet FAR requirements. Specifically, DARPA officials approved noncompetitive contracts, precontract costs, urgency justifications, and early start requests without adequate documentation. The inspection also concludes that renewed management support and involvement were needed to improve compliance with and to sustain the DARPA management control program.

The inspection report recommended that DARPA:

o appoint a qualified and independent competition advocate in compliance with DoD policy;

o require the officially appointed contracting officer representative to perform certain duties;

o establish a management review process to eliminate the use of the urgency and early start justifications;

o incorporate into contracts the requirement to recover nonrecurring costs and royalty fees;

o restrict the CMO effort to research and development and prototyping contracts and cease contracting for supplies, services, and materials that should be accomplished by supporting agencies;

o establish procedures to ensure timely centralized review and validation of precontract costs;

o provide managers with required contractual documents necessary to accomplish management and oversight responsibilities;

o review, challenge, and revise any justification and approval that does not specify clearly the unique qualifications of sole-source contractors and provide a cost estimate of the work to be accomplished;

o ensure that task descriptions specifically define the services, technical support, engineering support, and consultant services needed and ensure that needs are not available in the Government sector;

o ensure that contracted advisory and assisted services are used only when mission-essential and after completing cost studies;

o develop an action plan to ensure testing of all vulnerability assessments;

o ensure that all levels of management are held accountable for implementation and execution of the management control program; and

o add appropriate management control goals and measurable standards to applicable Senior Executive Service performance standards.

DARPA officials generally concurred with the contract management and oversight findings and recommendations and stated that they would initiate corrective actions. DARPA officials partially concurred with the management control program finding and recommendations, stating that they would implement the testing recommendation to the extent permitted by staffing ceilings. Finding A and Finding D discusses the inadequacy of actions taken by DARPA for those CMO areas.

Defense Logistics Agency

The Defense Logistics Agency conducted an independent PMR of the CMO. The review was performed by a team composed of representatives from the Military Departments and the Defense agencies. The PMR was performed from January 25 through February 5, 1993.

The 1993 PMR addresses the CMO mission and organization; policies and procedures; acquisition planning; solicitation, selection, and contracting; pricing; postaward functions; and contract management. Specific contract management and oversight issues identified in the 1993 PMR include the following issues:

o The CMO did not establish criteria for the selection, appointment, and termination of appointment of contracting officers and COTRs.

o The CMO did not use designation letters to establish and inform the COTR of duties and responsibilities under contracts.

o Although CMO instituted policy requiring additional controls over the issue of precontract costs (in response to the 1990 PMR), CMO officials authorized precontract costs without justifying the need.

o No policy governed the award and administration of other transaction agreements.

o Summary level data based on DD Form 350 input contained numerous coding errors (repeat from the 1990 PMR).

o DARPA did not designate cost or price analyst positions in the CMO, and the contract specialists did not have the time or tools to perform cost analyses.

o Price negotiation memorandums did not contain information sufficient to determine how the prenegotiation objectives were derived, how difficulties encountered during negotiations of individual elements were addressed, and how the final negotiated price was obtained.

o Several acquisition personnel did not complete level II and level III training courses.

The PMR team recommended that the CMO should:

o become more actively involved with the technical officers in the acquisition planning to preclude routine requests for precontract costs;

o comply with criteria in the applicable FAR, DARPA instruction, and CMO policy memorandum before authorizing precontract costs;

o consider recommending to the DDR&E working group on "other transactions" that it give particular attention to developing procedures for sharing costs, valuing noncash contributions, and determining what costs are to be considered allowable, allocable, and reasonable in furthering the Government's fiduciary responsibilities under the Federal Manager's Financial Integrity Act of 1982;

o institute a method of determining recurring DD Form 350 coding errors;

o make sure that the price negotiation memorandums and technical evaluations of contractor proposals address the required elements of the FAR;

o delegate more responsibilities to the cognizant administration contracting office; and

o either ensure that acquisition personnel meet the mandatory level II and III training courses or waive the requirement.

DARPA officials generally concurred with the findings and recommendations. We verified that DARPA officials initiated action to correct problems identified in the 1993 PMR. Finding A discusses the adequacy of actions taken by DARPA for those CMO areas that continue to have problems.

Appendix C. Transactions Reviewed During the Audit

Type of Instrument	Contractor Name	Value of Instrument
Contract No. MDA972-		
89-C-0020	Lockheed Missile and Space Company, Incorporated	$ 11,317,601
90-C-0018	3M	110,961,800
90-C-0021	Massachusetts Institute of Technology	22,400,000
91-C-0021	Tera Computer Company	21,500,000
91-C-0046	Johnson Matthey Electronics, Incorporated	30,677,867
92-C-0001	Analytical Systems Engineering Corporation	13,404,253
92-C-0011	Tektronix Federal Systems, Incorporated	4,812,000
93-C-0025	Lockheed Advanced Development Company	40,409,374
93-C-0027	Kendall Square Research Corporation	5,243,692
93-C-0040	Analytical Systems Engineering Corporation	3,041,067
93-C-0059	Hughes Aircraft Company	27,505,080
94-C-0001	MicroModule Systems, Incorporated	1,337,028
94-C-0004	Xerox Corporation	40,923,151
94-C-0015	Hughes Aircraft Company	483,976
94-C-0018	Bell Communications Research, Incorporated	360,000
94-C-0027	MicroModule Systems, Incorporated	6,361,226
95-C-0001	IBM - T.J. Watson Research Center	7,600,000
95-C-0003	Tera Computer Company	20,099,528
Total		**$368,437,643**
Grant No. MDA972-		
88-J-1001	Sematech, Incorporated	$ 763,831,097
90-J-1002	Focus Hope	85,684,226
92-J-1018	Virginia Center of Excellence	23,190,800
92-J-1032	Massachusetts Institute of Technology	21,000,000
93-1-0001	National Center for Manufacturing Sciences	15,332,000
93-1-0003	University of California at San Diego	38,093,351
93-1-0014	Earth Conservancy	14,000,000
93-1-0023	Northeastern University	15,000,000
93-1-0024	Southern Methodist University	382,284
93-1-0032	High Technology Development Corporation	5,000,000
93-1-0037	Massachusetts Institute of Technology	3,082,823
94-1-0006	Earth Conservancy	5,942,100
94-1-0009	Spokane Intercollegiate Research and Technology Institute	15,000,000
94-1-0010	High Technology Development Corporation	12,203,796
94-1-0013	Stevens Institute of Technology	5,728,823
Total		**$1,023,471,300**

Type of Instrument	Contractor Name	Value of Instrument
Cooperative Agreement No. MDA972-		
91-H-0001	California Institute of Technology	$ 4,200,000
Other Transactions No. MDA972-		
92-2-0007	Integrated High Performance Turbine Engine Technology Fiber Development Consortium	$ 13,000,000
93-2-0010	Synthesis and Processing of Intelligent Cost Effective Structures Program Consortium	10,575,499
93-2-0014	U.S. Display Consortium, Incorporated	92,680,000
93-2-0016	Optical Imaging Systems, Incorporated	100,500,000
93-2-0017	Cray Research, Incorporated	25,965,400
94-2-0001	Aehr Test Systems	16,750,000
94-2-0002	Mixed Signal Open Systems Consortium	4,950,000
94-2-0003	Southern Coalition for Advanced Transportation Consortium	43,696,333
94-2-0005	Northeast Alternative Vehicle Consortium, Incorporated	26,094,984
94-2-0006	MCM-L Consortium	40,615,675
94-2-0010	Trauma Care Informanagement	22,366,200
94-2-0011	The Boeing Company	29,030,500
94-3-0014	Fly-By-Light Advanced Systems Hardware Program	24,325,060
94-3-0019	Consortium For Intelligent Large Area Processing	14,982,000
94-3-0020	The Precision Laser Machining Consortium	38,300,051
94-3-0023	Xerox Corporation	100,000,000
94-3-0029	Affordable Composites for Propulsion Cooperative Arrangement	370,000,000
94-3-0030	Advanced Composites Technology Transfer/Bridge Infrastructure Renewal Consortium	22,009,761
94-3-0035	MCM-D Consortium	40,000,000
94-3-0042	Lockheed Advanced Development Company	124,945,487
95-3-0002	The Submerged Electric Drive Pump Commercial Spin-off Consortium	4,580,484
95-3-0009	Loral Systems Corporation	4,000,000
95-3-0012	Grumman Aerospace Corporation	3,990,598
95-3-0014	Giant Magnetoresistance Consortium	12,311,852
95-3-0021	Consortium for Vehicle Electronics	12,129,612
95-3-0022	Uncooled Low-Cost Technology Reinvestment Alliance Consortium	7,673,751
95-3-0024	National Semiconductor Corporation	19,192,716
95-3-0034	Westinghouse Electric Systems Corporation	8,100,000
Total		**$1,232,765,963**

Appendix D. Summary of Contract Issues

Contract Number MDA972-	Minimal Review of Cost Proposals	ACO[1] Evaluation of Proposals	DCAA[2] Rate Only Verification	Precontract Cost Justified	COTR[3] Assignment Letter	COTR[3] Performance Plans	PNM[4]	ACO Scheduled to Receive Reports
89-C-0020	No	No	No	--	No	5	No	No
90-C-0018	Yes	No	No	--	No	5	No	No
90-C-0021	Yes	No	Yes	--	5	5	--	No
91-C-0021	Yes	No	No	--	No	No	Yes	No
91-C-0046	Yes	No	No	--	No	No	No	No
92-C-0001	Yes	No	Yes	--	No	No	--	Yes
92-C-0011	Yes	No	No	--	No	No	No	Yes
93-C-0025	Yes	No	Yes	--	Yes	No	--	Yes
93-C-0027	Yes	No	--	--	No	5	--	No
93-C-0040	Yes	No	Yes	--	No	5	--	Yes
93-C-0059	No	No	No	--	Yes	5	No	No
94-C-0001	Yes	No	No	No	No	5	No	No
94-C-0004	Yes	No	No	No	No	5	No	No
94-C-0015	No	No	Yes	--	No	5	--	No
94-C-0018	Yes	No	Yes	--	Yes	No	--	Yes
94-C-0027	No	No	Yes	Yes	No	5	--	No
95-C-0001	No	No	Yes	--	Yes	No	--	Yes
95-C-0003	Yes	Yes	No	--	No	5	No	No
FOC[6]	13/18	1/18	8/17	2/3	4/17	7/7	1/9	6/18
POF[7]	72	0.06	47	66	23	100	11	33

[1] Administrative Contracting Officer.
[2] Defense Contract Audit Agency.
[3] Contracting Officer Technical Representative.
[4] Price Negotiation Memorandum.
[5] Did not obtain or the COTR assignment was duplicative to another contract.
[6] Frequency of Occurrances.
[7] Percent of Frequencies.

Appendix E. Summary of Grant Issues

Organization and Grant No.	Review of Recipient's Qualifications	Documented Cost Analysis	Payment Methods: Advances	Payment Methods: Payment Schedules	Grant Officer Appointed
Nonprofit Organizations					
Sematech, Incorporated, MDA972-88-J-1001	No	No	Yes	No	No
Focus: Hope, MDA972-90-J-1002	No	No	Yes	No	No
Virginia Center of Excellence, MDA972-92-J-1018	No	No	Yes	Yes	No
National Center for Manufacturing Sciences, MDA972-93-1-0001	No	No	Yes	No	No
Earth Conservancy, MDA972-93-1-0014	No	No	Yes	No	No
High Technology Development Corporation, MDA972-93-1-0032	No	Yes	Yes	Yes	No
Earth Conservancy, MDA972-94-1-0006	No	No	Yes	Yes	No
Spokane Intercollegiate Research and Technology Institute, MDA972-94-1-0009	No	No	Yes	Yes	No
High Technology Development Corporation, MDA972-94-1-0010	No	No	Yes	Yes	No
Universities					
Massachusetts Institute of Technology, MDA972-92-J-1032	Yes	No	Yes	Yes	No
University of California at San Diego, MDA972-93-1-0003	No	Yes	Yes	No	No
Northeastern University, MDA972-93-1-0023	Yes	No	Yes	Yes	No
Southern Methodist University, MDA972-93-1-0024	No	Yes	No	No	No
Massachusetts Institute of Technology, MDA972-93-1-0037	Yes	Yes	Yes	Yes	No
Stevens Institute of Technology MDA972-94-1-0013	Yes	No	No	No	No
Frequency of Occurances:	11/15	11/15	13/15	8/15	15/15
Percent of Frequencies:	73	73	87	53	100

Organization and Grant No.	Interest Tracked	Financial Status Report	Timely Modifications	Delegation Letter PM	Delegation Letter AGO	No-Cost Extension
Nonprofit Organizations						
Sematech, Incorporated, MDA972-88-J-1001	No	Yes	Yes	No	No	No
Focus: Hope, MDA972-90-J-1002	No	Yes	Yes	No	No	No
Virginia Center of Excellence, MDA972-92-J-1018	No	No	No	No	No	Yes
National Center for Manufacturing Sciences, MDA972-93-1-0001	No	No	No	No	No	No
Earth Conservancy, MDA972-93-1-0014	No	Yes	No	No	--[1]	Yes
High Technology Development Corporation, MDA972-93-1-0032	No	Yes	Yes	No	No	Yes
Earth Conservancy, MDA972-94-1-0006	No	Yes	Yes	No	No	Yes
Spokane Intercollegiate Research and Technology Institute, MDA972-94-1-0009	Yes	No	No	No	No	No
High Technology Development Corporation, MDA972-94-1-0010	No	Yes	No	No	No	No
Universities						
Massachusetts Institute of Technology, MDA972-92-J-1032	No	No	No	No	No	Yes
University of Calfornia at San Diego, MDA972-93-1-0003	No	No	No	No	No	No
Northeastern University, MDA972-93-1-0023	No	No	Yes	No	No	Yes
Southern Methodist University, MDA972-93-1-0024	--[2]	No	No	No	No	Yes
Massachusetts Institute of Technology, MDA972-93-1-0037	No	No	Yes	No	No	No
Stevens Institute of Technology MDA972-94-1-0013	--[2]	Yes	Yes	No	No	No
Frequency of Occurances:	12/13	8/15	8/15	15/15	14/14	7/15
Percent of Frequencies:	92	53	53	100	100	47

PM - Program Manager
AGO - Administrative Grant Officer

[1] DARPA never released the grant for administration.
[2] Grantee never received advanced funds and therefore had no interest requirement.

Appendix F. Summary of Other Transactions Issues

Other Transaction Number MDA972-	Determination and Finding Justification Acceptable	Adequate Documentation of Contributions Cost Analysis	Determine the Value of In-Kind Contributions	Determine the Value of IR&D Contributions	Inclusion of Interest Provision Clause	Interest Paid to Government
92-2-0007	No	No	--	--	No	No
93-2-0010	No	No	--	No	No	No
93-2-0014	No	No	--	--	No	Yes
93-2-0016	No	No	--	--	No	No
93-2-0017	No	No	--	--	No	No
94-2-0001	No	No	No	--	No	No
94-2-0002	No	No	--	--	No	No
94-2-0003	No	No	No	--	No	No
94-2-0005	No	No	No	No	No	No
94-2-0006	No	No	No	--	No	No
94-2-0010	No	No	No	--	No	No
94-2-0011	No	No	--	--	No	No
94-3-0014	No	No	--	No	No	No
94-3-0019	No	Yes	No	--	No	No
94-3-0020	No	Yes	Yes	Yes	No	No
94-3-0023	No	No	No	--	No	No
94-3-0029	No	No	No	No	Yes	No[1]
94-3-0030	No	No	No	No	Yes	No[1]
94-3-0035	No	No	No	--	Yes	No
94-3-0042	--	--	--	--	No	No
95-3-0002	No	No	No	--	No	No
95-3-0009	--	--	--	--	No	No
95-3-0012	--	--	--	--	No	No
95-3-0014	No	No	--	No	No	No
95-3-0021	No	Yes	No	--	No	No
95-3-0022	No	--	--	--	No	No
95-3-0024	No	No	No	--	No	No
95-3-0034	--	--	--	--	No	No
Total	**24**	**20**	**13**	**6**	**25**	**27**
FOC[2]	24/24	20/23	13/14	6/7	25/28	27/28
POF[3]	100	87	93	86	89	96

[1]Interest is reinvested in research program.
[2]Frequency of Occurances.
[3]Percent of Frequencies.

Appendix G. Negotiated Government and Consortium Contribution Share Percents

Agreement Number	Total Agreement	Total Government	Government Percent	Total Consortium	Consortium Percent
MDA972-92-2-0007	$ 13,000,000	$ 6,750,000	51.9	$ 6,250,000	48.1
MDA972-93-2-0010	10,575,499	5,094,601	48.2	5,480,898	51.8
MDA972-93-2-0014	28,400,000	20,000,000	70.4	8,400,000	29.6
MDA972-93-2-0016	98,500,000	48,000,000	48.7	50,500,000	51.3
MDA972-93-2-0017	25,515,000	7,415,000	29.1	18,100,000	70.9
MDA972-94-2-0001	16,750,000	6,500,000	38.8	10,250,000	61.2
MDA972-94-2-0002	4,800,000	2,400,000	50.0	2,400,000	50.0
MDA972-94-2-0003	8,921,321	4,055,000	45.5	4,866,321	54.5
MDA972-94-2-0005	11,452,000	4,100,000	35.8	7,352,000	64.2
MDA972-94-2-0006	39,765,375	16,009,452	40.3	23,755,923	59.7
MDA972-94-2-0010	16,259,600	7,486,500	46.0	8,773,100	54.0
MDA972-94-2-0011	32,465,000	16,200,000	49.9	16,265,000	50.1
MDA972-94-3-0014	24,325,060	12,000,000	49.3	12,325,060	50.7
MDA972-94-3-0019	14,982,000	8,314,000	55.5	6,668,000	44.5
MDA972-94-3-0020	32,920,052	16,029,203	48.7	16,890,849	51.3
MDA972-94-3-0023	100,000,000	50,000,000	50.0	50,000,000	50.0
MDA972-94-3-0029	370,000,000	130,000,000	35.1	240,000,000	64.9
MDA972-94-3-0030	21,009,761	10,500,000	50.0	10,509,761	50.0
MDA972-94-3-0035	40,000,000	20,000,000	50.0	20,000,000	50.0
MDA972-94-3-0042	115,700,000	115,700,000	100.0	0	0.0
MDA972-95-3-0002	4,580,484	2,149,926	46.9	2,430,558	53.1
MDA972-95-3-0009	4,000,000	4,000,000	100.0	0	0.0
MDA972-95-3-0012	3,990,598	3,990,598	100.0	0	0.0
MDA972-95-3-0014	12,311,852	5,941,481	48.3	6,370,371	51.7
MDA972-95-3-0021	12,129,612	5,384,329	44.4	6,745,283	55.6
MDA972-95-3-0022	7,673,751	3,500,000	45.6	4,173,751	54.4
MDA972-95-3-0024	19,192,716	9,578,005	49.9	9,614,711	50.1
MDA972-95-3-0034	8,075,000	8,075,000	100.0	0	0.0

Appendix H. Consortium Contribution Analysis

Other Transaction	Consortium Contribution	Cash Total	Cash Percent	Cash Equivalents Total	Cash Equivalents Percent	In-Kind Total	In-Kind Percent	IR&D[1] Total	IR&D[1] Percent
MDA972-92-2-0007	$ 6,250,000			$ 6,250,000	100.0				
MDA972-93-2-0010	5,480,898	916,687	16.7	1,774,719	32.4			$ 2,789,492	50.9
MDA972-93-2-0014	8,400,000			8,400,000	100.0				
MDA972-93-2-0016	50,500,000			50,500,000	100.0				
MDA972-93-2-0017	18,100,000			18,100,000	100.0				
MDA972-94-2-0001	10,250,000			8,350,000	81.5	$ 1,900,000	18.5		
MDA972-94-2-0002	2,400,000			2,400,000	100.0				
MDA972-94-2-0003	4,866,321			3,879,044	79.7	987,277	20.3		
MDA972-94-2-0005	7,352,000	476,730	6.5	4,652,740	63.3	1,124,180	15.3	1,098,350	14.9
MDA972-94-2-0006	23,755,923			19,662,093	82.8	4,093,830	17.2		
MDA972-94-2-0010	8,773,100			7,440,100	84.8	1,333,000	15.2		
MDA972-94-2-0011	16,265,000			16,265,000	100.0				
MDA972-94-3-0014	12,325,060			1,063,302	8.6			11,261,758	91.4
MDA972-94-3-0019	6,668,000			5,537,000	83.0	1,131,000	17.0		
MDA972-94-3-0020	16,890,849	250,000	1.5	2,499,438	14.8	2,765,954	16.4	11,375,457	67.3
MDA972-94-3-0023	50,000,000			37,196,078	74.4	12,803,922	25.6		
MDA972-94-3-0029	240,000,000	60,000,000	25.0	132,260,000	55.1	7,024,000	2.9	40,716,000	17.0
MDA972-94-3-0030	10,509,761	1,471,367	14.0	2,625,111	25.0	3,964,509	37.7	2,448,774	23.3
MDA972-94-3-0035	20,000,000			16,334,000	81.7	3,666,000	18.3		
MDA972-94-3-0042[2]	0	0	0.0	0	0.0	0	0.0	0	0.0
MDA972-95-3-0002	2,430,558			2,153,519	88.6	277,039	11.4		
MDA972-95-3-0009[2]	0	0	0.0	0	0.0	0	0.0	0	0.0
MDA972-95-3-0012[2]	0	0	0.0	0	0.0	0	0.0	0	0.0
MDA972-95-3-0014	6,307,000	3,220,271	51.1					3,086,729	48.9
MDA972-95-3-0021	6,745,283			5,911,918	87.6	833,365	12.4		
MDA972-95-3-0022	4,173,751	4,173,751	100.0						
MDA972-95-3-0024	9,614,711			7,712,476	80.2	1,902,235	19.8		
MDA972-95-3-0034[2]	0	0	0.0	0	0.0	0	0.0	0	0.0

[1]Independent Research and Development.
[2]These other transactions were funded by DARPA. No consortium contributions were made.

Appendix I. Summary of Other Transactions With Forfeited Interest

Other Transactions	High Range	Ending Balance	Interest Paid to U.S. Treasury	Interest Forfeited*
MDA972-93-2-0010	$ 1,009,000	$ 229,000		$303,604
MDA972-93-2-0014	5,791,000	2,308,000	$272,084	
MDA972-93-2-0016	13,000,000	699,000		502,551
MDA972-93-2-0017	5,291,000	5,291,000		270,020
MDA972-94-2-0001	1,860,000	1,762,000		135,575
MDA972-94-2-0003	2,222,000	1,820,000		103,510
MDA972-94-2-0005	3,313,000	2,920,000		102,760
MDA972-94-2-0006	778,000	403,000		27,630
MDA972-94-2-0010	1,323,000	23,000		39,640
MDA972-94-2-0011	12,551,000	12,551,000		672,750
MDA972-95-3-0021	638,000	448,000		10,184
Total			**$272,084**	**$1,894,980**

*Interest was calculated on the daily balance at 5 percent.

Appendix J. Other Transactions Participants

Other Transaction Number MDA972-	Participants
92-2-0007	Allied-Signal Aerospace Company Allison Engine Company General Electric Aircraft Engines United Technologies Corporation (Pratt & Whitney Division) Williams International
93-2-0010	Active Control Experts, Incorporated General Dynamics Corporation (Electric Boat Division) Martin Marietta (Defense Space and Communications Division) McDonnell Douglas Corporation Pennsylvania State University SRI International
93-2-0014	American Display Consortium American Telephone and Telegraph Company Optical Imaging System, Incorporated Standish Industries, Incorporated Xerox Corporation (Palo Alto Research Center)
93-2-0016	Optical Imaging Systems, Incorporated
93-2-0017	Cray Research, Incorporated
94-2-0001	Aehr Test Systems, Incorporated
94-2-0002	Harris Corporation Hughes Aircraft Company Raytheon Company (Missile Systems Division) TRW, Incorporated

Appendix J. Other Transactions Participants

Other Transaction Number MDA972-	Participants
94-2-0003	Advanced Vehicle Systems, Incorporated Florida Power and Light Company General Electric Company Southern Coalition for Advanced Transportation, Incorporated University of Southern Florida University of Texas at Austin Westinghouse Corporation
94-2-0005	New England Governors' Conference, Incorporated Northeast States for Coordinated Air Use Management
94-2-0006	Delco Electronics Corporation Hughes Missile Systems Company Jabil Circuit, Incorporated Litronic Industries Mentor Graphics Corporation Sheldahl, Incorporated Silicon Graphics, Incorporated Wireless Access, Incorporated
94-2-0010	American Telephone and Telegraph Company Digital Equipment Corporation ISX Corporation Medical College of Georgia Research Institute, Incorporated Rockwell International (Command and Control Systems Division) Rockwell International Science Center Science Applications International Corporation Texas Instruments Incorporated University of Maryland-Baltimore
94-2-0011	Boeing Company, Defense and Space Group (Military Aircraft Division)

Other Transaction Number MDA972-	Participants
94-3-0014	Allied-Signal Aerospace Company Honeywell, Incorporated Lear Astronics Corporation Martin Marietta (Control Systems Division) McDonnell Douglas Corporation (Aerospace Division)
94-3-0019	Acsist Associates, Incorporated Dow Chemical Company FAS Technologies, Incorporated Radiant Technology Company
94-3-0020	Boeing Company (Defense and Space Group) Caterpillar Incorporated Cummins Engine Company, Incorporated Edison Welding Institute Fibertek, Incorporated General Electric Company Hughes Aircraft Company Newport News Shipbuilding Northrop Corporation (Electronic Systems Division) Pennsylvania State University Process Equipment Company SDL, Incorporated TRW, Incorporated (Space and Electronics Group) United Technologies Corporation University of Illinois Utilase Systems, Incorporated

Appendix J. Other Transactions Participants

Other Transaction Number MDA972-	Participants
94-3-0023	American Telephone and Telegraph Company Standish Industries, Incorporated Xerox Corporation (Palo Alto Research Center)
94-3-0029	Boeing Company (Boeing Commercial Airplane Group) Dow-United Technologies Composite Products, Incorporated E.I. du Pont de Nemours and Company Hercules Incorporated (Hercules Aerospace Company) United Technologies Corporation (Pratt & Whitney Division) Vought Aircraft Company
94-3-0030	Amoco Performance Products, Incorporated Hercules Incorporated J. Muller International, Incorporated Trans-Science Corporation University of California - San Diego University of Delaware
94-3-0035	Boeing Company (Defense and Space Group) Hughes Aircraft Company Micro Module Systems nChip, Incorporated Texas Instruments Incorporated
94-3-0042	Lockheed Corporation (Lockheed Advanced Development Company)
95-3-0002	Ben Franklin Technology Center of Western Pennsylvania Westinghouse Electric Corporation (Electro Mechanical Division)
95-3-0009	Loral Systems Company

Other Transaction Number MDA972-	Participants
95-3-0012	Grumman Aerospace Corporation (Melbourne Systems Division)
95-3-0014	Federal Products Company Honeywell, Incorporated Nonvolatile Electronics, Incorporated
95-3-0021	Allied-Signal Corporation AMP-AKZO Company Auburn University Avex Electronics, Incorporated Chrysler Corporation Delco Electronics Corporation
95-3-0022	Honeywell, Incorporated Inframetrics, Incorporated Rockwell International Corporation New Jersey Institute of Technology
95-3-0024	Amoco Chemical Company Delco Electronics Corporation Dexter Corporation Integrated Packaging Assembly Corporation Leading Technologies, Incorporated National Semiconductor Corporation Olin Corporation Plaskon Electronic Materials, Incorporated Sheldahl, Incorporated
95-3-0034	Westinghouse Electro Systems Corporation

Appendix K. Recommendations Requiring Additional Management Comments

We request that the DDR&E and the Director, DARPA, comment on items indicated with an X.

Recommendation	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date
B.3.c. - Unwarranted Costs	DARPA	X	X	X
B.3.d. - Stock Warrants	DARPA	X	X	X
B.3.e. - Interest Payment	DARPA	X	X	X
C.1.d. - Audit Clause	DDR&E	X	X	X
C.1.e. - Cost Audits	DDR&E	X	X	X
C.1.f. - Audit Coordination	DDR&E	X	X	X
C.3.b. - Request Interest	DARPA	X	X	X
C.3.c. - Modify Agreements	DARPA	X	X	X
C.3.d. - Interest Earned	DARPA	X	X	X
D.1.b. - Document Evaluations	DARPA	X	X	X
D.2.b. - Test Controls	DARPA	X	X	X
D.2.c. - External Reviews	DARPA	X	X	X

Appendix L. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and Type of Benefit
A.1.a.	Management Controls. Requires documented analysis of contractor proposals.	Nonmonetary.
A.1.b.	Management Controls. Establishes the COTR responsibilities in their performance plans.	Nonmonetary.
A.1.c.	Management Controls. Establishes performance measures for contract management officials for use of assistance in issuing contracts.	Nonmonetary.
A.2.a., A.2.c.	Compliance With Regulations or Laws. Requires that the contracting officers identify actions taken on Defense Contract Audit Agency recommendations and requires the inclusion in contracting officers' performance plans the resolution of the recommendations.	Nonmonetary.
A.2.b., A.2.e., A.2.f.	Compliance With Regulations or Laws. Requires contracting officers to issue price negotiation memorandums and other needed information to administrative contracting officers and issue guidance to administrative contracting officers on their responsibilities.	Nonmonetary.
A.2.d.	Management Controls. Identifies and establishes responsibilities of the COTR.	Nonmonetary.

Appendix L. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and Type of Benefit
B.1.	Management Controls. Establishes performance measures for contract management officials for issuing and administering grants.	Nonmonetary.
B.2.a.	Compliance With Regulations or Laws. Requires grant officers to examine the qualifications of grantees before issuing grants.	Nonmonetary.
B.2.b., B.2.c., B.2.d.	Compliance With Regulations or Laws. Requires documented analysis of proposals. Also, ensures proper payments to grantees by minimizing advances and administering progress payments.	Nonmonetary.
B.2.e., B.2.i.	Compliance With Regulations and Management Controls. Requires the proper appointment of grant officers and identifies and establishes responsibilities of officials responsible for monitoring the grant effort.	Nonmonetary.
B.2.f.	Economy and Efficiency. Requires the monitoring of advanced funds to grantees and the receipt of potential interest payments.	Undeterminable. Benefits derived can only be determined when DARPA identifies that interest on advanced funds are due.
B.2.g., B.2.h.	Management Controls. Requires the distribution to administrative grant officers of the necessary documentation to effectively administer the grant and information necessary to properly monitor the grant.	Nonmonetary.

Recommendation Reference	Description of Benefit	Amount and Type of Benefit
B.3.a., B.3.b.	Economy and Efficiency. Requires the reevaluation of funds provided under a grant issued to the Spokane Intercollegiate Research and Technology Institute and the National Center for Manufacturing Sciences.	Undeterminable. Benefits will not be quantifiable until the required analysis is performed.
B.3.c.	Economy and Efficiency. Requires the recoupment of cost for unwarranted charges to a grant by Software Productivity Consortium.	Funds put to better use. $1.2 million of Research and Development funds could be applied to other programs.
B.3.d.	Economy and Efficiency. Requires the modification of a grant to SEMATECH to obtain monetary benefit from sale of stock warrants.	Undeterminable. Amount of funds cannot be determined until stock warrants are exercised.
B.3.e.	Economy and Efficiency. Requires the verification of the receipt of interest payment from the grantee.	Undeterminable. Amount of funds cannot be determined until receipt of interest payments.
C.1.a. through C.1.e.	Management Controls. Requires the establishment of policy to examine contributions, monitor costs, deposit appropriated funds in an interest-bearing account, and examine cost charged for research efforts.	Nonmonetary.
C.1.f., C.3.e.	Compliance With Regulations or Laws. Requires the review and approval of auditing services.	Nonmonetary.

Appendix L. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and Type of Benefit
C.2.	Management Controls. Establishes performance measures for contract management officials for issuing and administering "other transactions."	Nonmonetary.
C.3.a.	Management Controls. Requires the justification of the selection process to comply with guidance.	Nonmonetary.
C.3.b., C.3.c., C.3.d.	Economy and Efficiency. Requires the determination of whether interest was obtained from excess appropriated funds and review of actions for interest payments that may be due.	Undeterminable. The amount of interest received cannot be determined until the funds are received by the funds recipient.
D.1.a.	Management Controls. Places an emphasis on an effective management control program.	Nonmonetary.
D.1.b.	Management Controls. Requires the documentation of management controls reviews, supplemental management reviews, and vulnerability assessments.	Nonmonetary.
D.2.a.	Management Controls. Requires the development of management control plan for contracts, grants, cooperative agreements, and "other transactions."	Nonmonetary.
D.2.b., D.2.c.	Management Controls. Requires the documentation of acquisition management controls and performance tests to determine whether corrective action has been responsive.	Nonmonetary.

Appendix M. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
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Assistant Secretary of Defense (Public Affairs)
Director, Defense Procurement
Director of Defense Research and Engineering
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Assistant Secretary of the Army (Research, Development, and Acquisition)
Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Chief of Naval Research, Office of Naval Research
Auditor General, Department of the Navy

Department of the Air Force

Office of the Assistant Secretary (Acquisition)
Assistant Secretary of the Air Force (Financial Management and Comptroller)
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Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
  Defense Contract Management Command
    Director, Defense Contract Management Area Office Seattle

Defense Organizations (cont'd)

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  Inspector General, National Security Agency
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Office of Management and Budget
Technical Information Center, National Security and International Affairs Division, General Accounting Office

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  Senate Committee on Appropriations
  Senate Subcommittee on Defense, Committee on Appropriations
  Senate Committee on Armed Services
  Senate Committee on Governmental Affairs
  House Committee on Appropriations
  House Subcommittee on National Security, Committee on Appropriations
  House Committee on Government Reform and Oversight
  House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
  House Committee on National Security

Part III - Management Comments

Director of Defense Research and Engineering Comments

DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING
3030 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-3030

FEB 5 1997

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL (AUDITING)

SUBJECT: Draft Report on Contracts, Grants and OTs

The attachment to this memorandum provides comments on recommendation C.1. of a draft report entitled "Award and Administration of Contracts, Grants, and Other Transactions Issued by the Defense Advanced Research Projects Agency." The draft report is dated October 25, 1996 and is associated with Project Number 5AB-0052. The Director of the Defense Advanced Research Projects Agency is responding separately to the draft report's other recommendations, which were addressed to him.

I appreciate having this opportunity to comment on the draft report.

Anita K. Jones

Attachment

COMMENTS ON RECOMMENDATIONS C.1.a. THROUGH C.1.f. OF DRAFT INSPECTOR GENERAL REPORT FOR PROJECT 5AB-0052

The target completion date for actions resulting from the responses below would be late 1997, through codification of a part of the DoD Grant and Agreement Regulations (DoDGARs) that now is being developed to provide guidance for the type of OT described in the draft report.

Recommendation C.1.a. We recommend that the Director of Defense Research and Engineering (DDR&E) issue guidance for awarding and administering "other transactions" (OTs) that requires the awarding agency to document evaluations of cash equivalents, in-kind contributions, and independent research and development (IR&D) cost contributions in research proposals. The documentation should detail how the value of cash equivalents, in-kind contributions, and IR&D values were determined to be fair and reasonable.

Response: The DDR&E concurs. The part of the DoD Grant and Agreement Regulations (DoDGARs) that is being developed to provide guidance for this type of OT will require the agreements officer to document in the award file the evaluation of the recipient's contributions to the funding of the project.

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Recommendation C.1.b. We recommend that the DDR&E issue guidance for awarding and administering OTs that requires contracting officers to monitor actual cost at performance payable milestones and adjust payments when appropriated funds are in excess of actual costs.

Response: The DDR&E concurs, and the DoDGARs part for this type of OT will state a requirement for agreements officers to work with program officers to: (1) monitor the total amount of project expenditures, as recorded in the quarterly business status reports (note that those expenditure amounts are required to precisely match the payable milestone amounts at the submission of the final report, and not necessarily before that time); and (2) adjust future payable milestones, as needed to closely match the payments to the recipient's cash needs for the project.

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Recommendation C.1.c. We recommend that the DDR&E issue guidance for awarding and administering OTs that requires that the contracting officer incorporate an agreement clause that provides for the consortium to place appropriated funds in an interest-bearing account and submit the interest to the U.S. Treasury, making annual notification of the interest payments to the awarding agency.

Response: The DDR&E concurs with this recommendation. ODDR&E staff understand that DARPA's OTs have included a similar interest clause since July, 1996.

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Recommendation C.1.d. We recommend that the DDR&E issue guidance for awarding and administering OTs that requires that the contracting office incorporate an audit clause that allows the DoD or its representative the right to audit the cost associated with research efforts.

Response: The DDR&E concurs in part with the recommendation. Specifically, the DDR&E concurs with adding to the DoD guidance for this type of OT a requirement for the agreements officer, generally, to include a clause giving DoD or its representative access to recipient records that account for the Federal funds and recipient funds expended on the project. However, the intent of these agreements is to increase involvement in DoD programs by commercial firms that traditionally have not entered into contracts or agreements with the Government and that are not prepared to accept all of the Government-unique requirements typically included in such instruments. Consistent with that intent, it may be necessary in some cases to negotiate an alternative approach to ensuring the proper use of project funds. For example, the recipient's independent auditor, subject to that auditor being acceptable to the awarding agency, might be given access to recipient records pertinent to the project, for the purposes of examination or audit.

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Recommendation C.1.e. We recommend that the DDR&E issue guidance for awarding and administering OTs that requires final cost audits. The audits should include an examination of the research cost in relation to the cost share ratio established in the agreement.

Response: The DDR&E agrees that the guidance for this type of OT should include procedures for ensuring that recipients contribute the agreed-upon funding amounts to the project, but does not concur with routinely requiring final cost audits. Procedures to be utilized include agreement administrators' and program officials' review of: expenditures at payable milestones (see response to recommendation C.1.b., above); quarterly financial reports submitted by the recipient during a project; and the financial status report submitted at the end of the project. If there is reasonable assurance that a recipient has the necessary management systems and internal controls to ensure compliance with Federal requirements, including cost sharing, one need not routinely require final cost audits of individual awards.

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Recommendation C.1.f. We recommend that the DDR&E issue guidance for awarding and administering OTs that emphasizes compliance with DoD Directive 7600.2, "Audit Policies," February 2, 1991, to coordinate with the Inspector General, DoD, on audits of OTs.

Response: Although it is ambiguous whether the limitation on contracting for audit services in DoD Directive 7600.2 applies to instruments other than procurement contracts, the DDR&E concurs with including in the guidance for all types of OTs a requirement for a DoD component to coordinate with the IG, DOD, in individual cases where it either: (1) contracts with a non-Federal independent auditor for audit of a recipient; or (2) requires a recipient to hire an independent auditor (other than the independent auditor that audits the recipient's financial

statements, as described in the following paragraph) to conduct an award-specific audit on behalf of the Government.

However, there should not be a requirement for the IG, DoD, to be consulted in each individual case if DoD policy or the award terms require the recipient to have a "single audit" performed by the independent auditor that audits the recipient's financial statements. A "single audit" would be an expansion upon the audit of the financial statements, to include a review of the internal control structure to provide assurances that the recipient is managing Federal awards in compliance with Federal laws and regulations, and with the terms and conditions of the awards. The assurances provided by "single audits" can obviate or greatly reduce the need for final cost audits of individual awards.

Defense Advanced Research Projects Agency Comments

ADVANCED RESEARCH PROJECTS AGENCY
3701 NORTH FAIRFAX DRIVE
ARLINGTON, VA 22203-1714

January 22, 1997

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING

SUBJECT: Audit Report on the Award and Administration of Contracts, Grants, and Other Transactions Issued by the Defense Advanced Research Projects Agency (Project No. 5AB-0052)

This is in response to Ms. Patricia Brannin's memorandum of October 25, 1996, subject as above, requesting agency review and comment on the draft report by January 6, 1997. An extension in the due date was provided orally by Mr. Roger Florence, Audit Project Manager.

The comments of Defense Advanced Research Projects Agency (DARPA) management are attached. A summary corrective action plan is provided at the beginning of the agency response. The Director of Defense Research and Engineering is responding separately to the recommendations which were addressed to her.

Larry Lynn
Director

Attachment

Agency Response to DODIG Audit of DARPA

Summary Corrective Action Plan

Rec.	Cognizant Official	Action Planned	Target Completion Date
A.1.a	Dir., DARPA	Concur in part. Improve cost element documentation.	Dec. 31, 1997
b.	Dir., DARPA	Concur. Contract monitoring in COTR performance plans.	Aug. 31, 1997
c.	Dir., DARPA	Concur. Performance measures for contract management officials.	Aug. 31, 1997
A.2.a.	Dir., CMO	Concur. Guidance on documenting DCAA recommendations.	Apr. 30, 1997
b.	Dir., CMO	Concur. Issue PNMs to ACO and DCAA.	Feb. 28, 1997
c.	Dir., CMO	Concur. Add disposition of DCAA audits to performance plans of contracting officers.	Aug. 31, 1997
d.	Dir., CMO	Concur. Designation letters to COTRs.	Apr. 30, 1997
e.	Dir., CMO	Concur. Delegation letters to ACOs.	Jul. 31, 1997
f.	Dir., CMO	Concur. Distribute mods and reports to ACOs.	Feb. 28, 1997
B.1.	Dir., DARPA	Concur. Performance measures for grant management officials.	Aug. 31, 1997
B.2.a.	Dir., CMO	Concur. Examine grantee qualifications.	Jun. 30, 1997
b.	Dir., CMO	Concur. Document cost analyses and NFEs.	Jun. 30, 1997
c.	Dir., CMO	Concur. Minimize advances and require interest-bearing accounts.	Jun. 30, 1997
d.	Dir., CMO	Concur. Base payments on accomplishments.	Jun. 30, 1997
e.	Dir., CMO	Concur. Appoint grant officers per DODGARs.	Jun. 30, 1997
f.	Dir., CMO	Concur. Track and verify interest payments.	Jun. 30, 1997
g.	Dir., CMO	Concur. Distribute grant information to AGOs.	Feb. 28, 1997
h.	Dir., CMO	Concur. Require financial reports per A-110.	Jun. 30, 1997
i.	Dir., CMO	Concur. Delegation letters to AGOs and PMs.	Jun. 30, 1997
B.3.a.	Dir., CMO	Concur in part. Review and improve financial management of SIRTI grant.	Mar. 31, 1997
b.	Dir., CMO	Concur in part. Review and improve financial management of NCMS grant.	Mar. 31, 1997
c.	Dir., CMO	Non-concur. No legal basis for recouping grant charges.	
d.	Dir., CMO	Concur in part. Director, DARPA to determine Government course of action.	Dec. 31, 1997
e.	Dir., CMO	Concur. Obtain interest payment from NCMS.	Mar. 31, 1997
C.1.a.	DDR&E	[Responses to this section provided separately by DDR&E]	
b.	DDR&E		
c.	DDR&E		
d.	DDR&E		
e.	DDR&E		
f.	DDR&E		

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Rec.	Cognizant Official	Action Planned	Target Completion Date
C.2.	Dir., DARPA	Concur. Performance measures for contract management officials on other transactions.	Aug. 31, 1997
C.3.a.	Dir., CMO	Concur. Improve justifications on other transactions.	Dec. 31, 1997
b.	Dir., CMO	Concur in part. Verify interest payments on applicable other transactions.	Jun. 30, 1997
c.	Dir., CMO	Concur in part. Modify other transactions and obtain interest payments.	Dec. 31, 1997
d.	Dir., CMO	Concur. Interest clause added. Interest will be tracked and reported.	Completed
e.	Dir., CMO	Concur in part. Revisit audit clause and coordinate in certain circumstances.	Dec. 31, 1997
D.1.	Dir., DARPA	Concur in part. Review DARPA Inst. 37 and revise as necessary.	Sep. 30, 1997
D.2.a.	Dir., CMO	Concur. Develop plan on CMO functional areas for further reviews.	Dec. 31, 1997
b.	Dir., CMO	Concur. Test acquisition management controls and document results.	Dec. 31, 1997
c.	Dir., CMO	Concur. Test corrective actions from external reviews.	Dec. 31, 1997

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Agency Response to DODIG Audit of DARPA

Executive Summary

Agency Comment: In the Executive Summary, under "Audit Results," several assertions are made about grants, other transactions, and management controls which the Defense Advanced Research Projects Agency (DARPA) does not accept. Each of these contested findings is specifically addressed below, in the agency comments on Findings B, C and D.

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Final Report Reference

Revised

Part I - Audit Results

Finding A. Contracts

- Page 4, last paragraph: "In February 1993, a Procurement Management Reviw (PMR) lead by the Defense Logistics Agency assessed..."

  Agency Comment: The leader of the PMR team was from the Defense Logistics Agency, but the review was set up by, and conducted for, the Director, Defense Procurement.

- Page 5, paragraph fragment at top of page: "We found that although DARPA had established the policies and procedures to correct the deficiencies, the changes had not been implemented, and the same or similar problems still existed. Therefore, the Contracts Management Office did not effectively emphasize compliance with the 1993 PMR recommendations (Finding D)."

  Agency Comment: CMO did not complete corrective action on the 1993 PMR until February 1995 (five months into FY 1995). This DODIG audit began on June 5, 1995. Among the contracts reviewed here, only two were from early FY 1995. All the rest were from earlier years. The earliest time when corrective action from the PMR could have been fully evident was March 1995. Since the auditors did not review any contracts issued since March 1995, it is quite possible that the effects of corrective action from the PMR were not wholly visible. CMO made major improvements in its contract file documentation in response to the PMR. These improvements were clearly visible starting in late FY 1995. It was not the fault of CMO that the sample was drawn from an earlier time frame.

Recommendation A.1 (to Director, DARPA)

a. Establish guidance that prohibits the contracting officers from issuing contracts when the contracting officer technical representative has not submitted evidence of documented technical evaluation of the direct cost elements in the contractor proposal.

R. We concur in part. We do not think it wise to prohibit contracting officers from performing the functions they have been trained and empowered to do. We agree, however, that the quality and detail of documentation on proposed costs coming from DARPA COTRs needs improvement and that contracting officers must ensure that adequate documentation is provided. As alternative action, we

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will undertake three activities toward this end: Improved tools for proposal cost evaluation; additional training; and management emphasis. To improve the tools for proposal cost evaluation, we will improve existing formats and samples for written and computer spreadsheet documentation. Since a significant number of DARPA COTRs are new to the agency, we will conduct tailored training on this subject three or four times during the next year. To insure that improved technical cost evaluations are actually getting into the contract files, we will make this an area of management emphasis in each instrument review conducted by CMO during the next year. Poorly documented files will be returned for correction.

Target Completion Date: December 31, 1997

b. Require that contracting officer technical representative performance plans identify contractor monitoring as a critical job element and establish performance measures for meeting the element.

R. We concur. We will amend the performance plans of COTRs at the beginning of the next appraisal cycle to include the monitoring of contracts, grants, and other transactions as a performance measure under one of the critical elements. This change may require extensive coordination within the agency, since it will directly affect program managers.

Target Completion Date: August 31, 1997

c. Establish performance measures for contract management officials for the use of contracting officer technical representative evaluation of proposals, for disposition of Defense Contract Audit Agency recommendations, and for use of price negotiation memorandums to reflect differences in contractor proposals and negotiated price.

R. We concur. We will insert such performance measures into the performance plans of the CMO director and deputy at the beginning of the next rating year, to correspond with similar changes for COTRs and CMO contracting officers. In advance of that, we will appoint one of the procurement assistants in CMO as audit coordinator, to insure disposition of DCAA recommendations.

Target Completion Date: August 31, 1997

Recommendation A.2 (to Director, CMO)

a. Issue guidance to contracting officers to document in the price negotiation memorandums the rationale for not using Defense Contract Audit Agency recommendations as required by the

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Federal Acquisition Regulation 15.808, "Price Negotiation Memorandum."

R. We concur. We will issue such guidance, probably in the form of a more comprehensive memorandum on file documentation for contracts, grants, and other transactions.

Target Completion Date: April 30, 1997

b. Establish procedures to ensure the contracting officers issue price negotiation memorandums to the administrative contracting officer and the Defense Contract Audit Agency in compliance with DoD Directive 7640.2, "Policy for Follow-up on Contract Audit Report," and Federal Acquisition Regulation 15.808, "Price Negotiation Memorandum."

R. We concur. This is a problem that can and should be fixed in short order.

Target Completion Date: February 28, 1997

c. Revise the Contracts Management Office contracting officers' standard performance plans to include disposition of Defense Contract Audit Agency audit report recommendations.

R. We concur. We will so revise the performance plans of CMO contracting officers at the beginning of the next rating year, to correspond with similar changes for COTRs and CMO management officials.

Target Completion Date: August 31, 1997

d. Issue contracting officer technical representative designation letters for all contracts that have ongoing research. The contracting officer technical representative letter should specify the technical responsibilities and limitations that the representative has in monitoring contractor performance.

R. We concur. We already have procedures in place requiring COTR designation letters for all new awards. We will supplement this with a procedure requiring COTR designation letters for all modifications that involve new procurement. Such a procedure will not be easy or automatic, since the alignment of COTRs has shifted radically in the last year and a half from a major reorganization in DARPA and personnel turnover.

Target Completion Date: April 30, 1997

e. Require contracting officers to issue guidance to administrative contracting officers on the administrative responsibilities delegated for monitoring the contractor's effort in research contracts.

R. We concur. It does not make sense to develop a procedure for delegation letters that applies only to contracts. We will develop a procedure that applies to contracts and grants. Delegation letters are already in use in CMO for other transactions, under the pilot project with the Defense Contract Management Command. We will develop model delegation letters, available on the computer, for contracting officers and grants officers to use. For effectiveness, these will need to be coordinated and refined with input from ACOs and AGOs.

Target Completion Date: July 30, 1997

f. Require contracting officers to include the administrative contracting officers in the distribution of all contract modifications and contract cost and project status reports.

R. We concur. This is a problem that can and should be fixed in short order. We will need to modify our standard reporting clauses.

Target Completion Date: February 28, 1997

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Final Report Reference

Revised

Finding B. Grants

o Page 16, summary paragraph entitled "Finding B. Grants."

Agency Comment: We think this criticism is overly severe, considering that all nine of the grants to nonprofit organizations were Congressionally-directed and that grants are assistance instruments, providing support and stimulation, not procurement contracts. Congress lawfully can and does select the funding amounts and recipients on some projects. Further, this paragraph is worded in such a way that it leaves one with the impression that none of the 15 grant awards was proper and that none of these grants is being properly administered. That impression is incorrect and biased in a negative way. While we do accept most of the criticism contained in this section of the report, we insist that that criticism be stated in a fair, accurate, and constructive manner.

o Page 19, section entitled "Advances."

Agency Comment: Advances were at that time, and still are, the preferred method of payment on federal grants. Both of the grants cited in this section were Congressionally-directed and funded with designated amounts year after year.

Recommendation B.1 That the Director, Defense Advanced Research Projects Agency, establish performance measures for grant officer management officials to include measures to review grantee qualification, perform proposed cost analyses, minimize grant advances, track interest payments, obtain financial and administrative documents, and issue delegation letters.

R. We concur. We will insert such performance measures into the performance plans of grant management officials at the beginning of the next appraisal cycle, after appropriate coordination.

Target Completion Date: August 31, 1997

Recommendation B.2 That the Director, Contracts Management Office, Defense Advanced Research Projects Agency, develop procedures to:

a. Examine the qualifications of grantees before issuing grants.

R. We concur. We will develop such procedures, probably in the form of a CMO policy memorandum. Resource constraints dictate that assistance be obtained from Administrative Grants Officers (AGOs) in performing this function.

Target Completion Date: June 30, 1997

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b. Require each grant proposal to have a documented cost analysis and review the need for no-cost extensions before approval.

R. We concur. We will develop such procedures.

Target Completion Date: June 30, 1997

c. Minimize advance payments and verify that advanced funds are deposited in interest-bearing accounts as required by Office of Management and Budget Circular A-110, "Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations."

R. We concur. We will develop such procedures.

Target Completion Date: June 30, 1997

d. Base the research payment methods on work efforts accomplished.

R. We concur. We will develop such procedures, consistent with the understanding that grants are assistance instruments, intended for support and stimulation.

Target Completion Date: June 30, 1997

e. Appoint grant officers in accordance with the DoD Grant and Agreement Regulations.

R. We concur. We will develop such procedures.

Target Completion Date: June 30, 1997

f. Track interest payments on grants and verify that grantees are submitting interest payments to the U.S. Treasury annually.

R. We concur. We will develop such procedures.

Target Completion Date: June 30, 1997

g. Require grantee proposals, budgets, grant modifications, grant cost analyses, and financial status information to be issued to the administrative grant officers to assist in their grant administration.

R. We concur. This is a problem that can and should be fixed in short order. We will develop such procedures in conjunction with our corrective action on Recommendation A.2.f. above.

Target Completion Date: February 28, 1997

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h. Require each grantee to submit financial documentation that includes grantees expenditures, cash reserves, and financial status as required by the Office of Management and Budget Circular A-110, "Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations."

R. We concur. We will develop such procedures.

Target Completion Date: June 30, 1997

i. Define the responsibilities and authority of the administrative grant officers and program managers and issue letters delegating those responsibilities and authority.

R. We concur. We will develop such procedures.

Target Completion Date: June 30, 1997

Recommendation B.3 That the Director, Contracts Management Office, Defense Advanced Research Projects Agency, take the following actions on grants:

a. Evaluate the Spokane Intercollegiate Research and Technology Institute research effort, request a new budget, change the payment method, review the accounting system, and withdraw all excess advanced funds.

R. We concur in part. We will conduct all of the activities mentioned, except withdrawing funding that already has been placed on the grant. In the absence of wrongdoing by the grantee, the withdrawal of funds is inconsistent with an assistance relationship. As an alternative, we will devote full management attention to working long-term with the grantee to solve its expenditure and performance problems, and will hold up further funding until substantial progress is made toward recovery.

Target Completion Date: March 31, 1997

b. Evaluate the National Center for Manufacturing Sciences research effort, request a new budget, change the payment method, and withdraw.all excess advanced funds.

R. We concur in part. We have begun action on all of the activities mentioned, except withdrawal of funds already placed on the grant. Our rationale for not withdrawing funds and our alternative course of action are the same as those in the response to Recommendation B.3.a. above.

Target Completion Date: March 31, 1997

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c. Obtain $1.2 million from the Software Productivity Consortium for unwarranted costs.

R. We do not concur. The Virginia Center of Excellence, which was the source of the costs questioned in the report, was removed as the grantee on March 20, 1995, and is no longer involved with the grant. No wrongdoing on the part of the Virginia Center of Excellence or Software Productivity Consortium has ever been established. The Software Productivity Consortium has an acceptable record of technical performance. The grants officer has no legal basis for recouping grant charges that were neither illegal nor unallowable.

d. Modify the SEMATECH grant to provide that the Government receive compensation commensurate with its investment from the stock warrant proceeds, if exercised.

R. We concur in part. The matter of the stock warrant has been at issue between the grants officer and SEMATECH for over a year. Numerous letters have been exchanged between the parties, and legal counsel for both parties have been involved from the beginning. Although we cannot predict how the matter will be resolved, the positions of the parties shortly will be referred to the Director, DARPA for a decision on the Government's course of action. That action could include seeking compensation for the Government, if that is determined to be in the best interest of the Government.

Target Completion Date: December 31, 1997

e. Verify that the National Center for Manufacturing Sciences submitted the interest payment of $118,000. If not, take appropriate action to obtain the interest payment.

R. We concur. We will take appropriate action, after determining the status of the interest payment.

Target Completion Date: March 31, 1997

Finding C. Other Transactions

o Pages 32-33, Section entitled "Determination and Finding"

Agency Comment: We vigorously dispute the assertion that DARPA justifications for other transactions were inadequate and did not satisfy public law or DDR&E requirements. Both Congress and the General Accounting Office have praised DARPA's use of the 10 U.S.C. 2371 authority and other transactions. Neither the DDR&E nor the Director of DARPA would have allowed and encouraged DARPA CMO to issue more than 100 other transactions in recent years if their usage had been improper or unjustified. Finally, every justification criticized in this report was reviewed and found sufficient by legal counsel.

We understand that the effectiveness of any justification is a matter of opinion and that file documentation can almost always be improved. In that spirit, we will concur in the finding and attempt to improve the justifications along the lines suggested in the report.

Recommendation C.1. That the Director, Defense Research and Engineering, issue guidance for awarding and administering "other transactions" that:

a. Requires the awarding agency to document evaluations of cash equivalents, in-kind contributions, and independent research and development costs contributions in research proposals. The documentation should detail how the value of cash equivalents, in-kind contributions, and independent research and development values were determined to be fair and reasonable.

b. Requires contracting officers to monitor actual costs at performance payable milestones and adjust payments when appropriated funds are in excess of actual costs.

c. Requires that the contracting officer incorporate an agreement clause that provides for the consortium to place appropriated funds in an interest bearing account and submit the interest to the U.S. Treasury, making annual notification of the interest payments to the awarding agency.

d. Requires that the contracting officer incorporate an audit clause that allows the DoD or its representative the right to audit the cost associated with research efforts.

e. Requires final cost audits. The audits should include an examination of the research cost in relation to the cost share ratio established in the agreement.

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f. Emphasizes compliance with DoD Directive 7600.2 "Audit Policies," February 2, 1991, to coordinate with the Inspector General, DoD, on audits of "other transactions."

R. Response to recommendation C.1, Subparts a through f, will be provided separately by the DDR&E.

Recommendation C.2 That the Director, Defense Advanced Research Projects Agency, establish performance measures for contracting management officials for "other transactions" to include monitoring costs, include an interest provision in agreements, and provide documented evaluations of the value of non-Government contributions.

R. We concur. In consonance with our response to Recommendation A.1.c. above, we will insert additional performance measures for other transactions into the performance plans of CMO management officials at the beginning of the next rating year.

An interest provision has been included in all DARPA other transactions issued since July 1996.

In consonance with corrective action under Recommendation A.2.a. above, DARPA will issue more comprehensive guidance on file documentation for contracts, grants, and other transactions. This will require action by DARPA COTRs as well as contracting officers.

Target Completion Date: August 31, 1997

Recommendation C.3 (To Director, CMO)

a. Develop procedures to comply with the Director, Defense Research and Engineering, selection guidance by establishing written policy and procedures that require detailed documented justifications in the use of "other transactions," including specific reasons why other types of actions were not feasible.

R. We concur. While we agree that the file of each other transaction should be documented with the rationale for using an other transaction, we do not agree that an other transaction is an instrument of last resort, which may be used only after contracts, grants, and cooperative agreements have been absolutely eliminated from consideration. Our position on this matter is strongly supported by the DARPA director and general counsel, and has been confirmed by recent changes in the wording of the statute. Further, the Congress is on record as encouraging the use in DoD of the 10 U.S.C. 2371 authority, thus providing a clear indication of legislative intent with regard to the wording of the statute.

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As corrective action on this recommendation, we will work with the DDR&E working group to develop written policy and procedures for justifications on the use of other transactions, including reasons why other instrument types generally are not feasible or appropriate.

Target Completion Date: December 31, 1997

b. Require contracting officers to review all "other transactions" to determine whether Government appropriated funds were deposited in interest-bearing accounts. For those "other transactions" that earned interest from appropriated funds, request the interest be submitted to the U.S. Treasury and have the interest payments reported to the Defense Advanced Research Projects Agency.

R. We concur in part. The only other transactions that required recipients to return interest were those that incorporated an interest clause. On all such agreements, we will task the agreement administrator with determining whether appropriated funds were deposited in interest-bearing accounts and checks were submitted to the Treasury.

Target Completion Date: June 30, 1997

c. Require contracting officers to modify all existing "other transactions" to ensure that appropriated funds are maintained in an interest bearing account, submit interest earned from appropriated funds to the U.S. Treasury, and report the interest payment to the Defense Advanced Research Projects Agency.

R. We concur in part. Since July 1996 DARPA has included an interest clause in all of its other transactions, even though the prospect of interest accumulation directly conflicts with the use of performance payable milestones in cost-shared agreements. Unlike grants, which are not cost-shared and may be funded with advances, other transactions are intended to be funded as technical milestones are achieved, with both parties contributing to the funding. Ideally, no significant cash reserves of federal funding will exist and no interest will accumulate. The operating procedures behind all of the consortium agreements were crafted with this funding principle in mind.

In the interest of good cash management and proper stewardship of federal funds, we will require that, during the next year, agreement administrators revisit their other transactions over the interest issue. We are not abandoning our commitment, however, to a performance payable milestone scheme where payment is based upon achievement, milestones are adjusted to achieve good cash management, and federal funds are never held in reserve to accumulate interest.

Target Completion Date: December 31, 1997

d. Request the Northeast Alternative Vehicle Consortium, Incorporated, to submit interest earned from appropriated funds to the U.S. Treasury and report the interest payment to the Defense Advanced Research Projects Agency.

R. We concur. The interest clause was added to the subject other transaction by Amendment 0018 dated September 9, 1996. Interest payments, if any, will be tracked and reported to DARPA as the work continues.

Action Completed, as of December 31, 1996

e. Initiate action to obtain approval from the Office of the Inspector General, DoD, as required by DoD Directive 7600.2, "Audit Policies," February 2, 1991, of the audit clauses included in "other transactions" that allow an audit by an independent accounting firm. Approval should also include the audit clauses in existing "other transactions" agreements.

R. We concur in part. In consonance with the position of the DDR&E on this issue, we agree to coordinate with the IG, DoD in individual cases where DARPA either: (1) directly contracts with a non-Federal independent auditor for audit of a recipient; or (2) requires a recipient to hire an independent auditor (other than the independent auditor that audits the recipient's financial statements, as described in the following paragraph) to conduct an award-specific audit on behalf of the Government. As a member of the DoDGARs working group, DARPA will seek to revise wording in the DoDGARs to implement this change. We will also revisit the wording of audit clauses in our other transactions to make them consistent.

However, there should not be a requirement for the IG, DoD, to be consulted in each individual case if DoD policy or the award terms require the recipient to have a "single audit" performed by the independent auditor that audits the recipient's financial statements. A "single audit" would be an expansion upon the audit of the financial statements, to include a review of the internal control structure to provide assurances that the recipient is managing Federal awards in compliance with Federal laws and regulations, and with the terms and conditions of the awards. The assurances provided by "single audits" can obviate or greatly reduce the need for final cost audits of individual awards.

Target Completion Date: December 31, 1997

Final Report Reference

Finding D. Acquisition Management Control System

Page 46 Revised

- Page 43, summary paragraph entitled "Finding D. Acquisition Control System"

  Agency Comment: Although DARPA accepts much of the specific criticism presented in this section of the report, we cannot accept many of the generalized assertions in this paragraph. We strongly dispute the contentions that management did not make a genuine effort to comply with management control program requirements, did not adequately emphasize the importance of management controls, and was not aware of numerous management and cost problems. We do not believe the findings presented in this section adequately support any of those conclusions. DARPA emphasizes cost-effective management controls and reasonable assurance, not air-tight controls and absolute assurance. We can improve our acquisition management controls and will accept constructive criticism toward that end.

Page 46

- Page 43, first paragraph under "Management Control Policy": "DARPA officials responsible for the agency's management control program indicated that they have no plans to develop a new program as a result of management control policy revisions."

  Agency Comment: Existing agency policy exceeds the new OMB guidance in that DARPA will continue to conduct periodic vulnerability assessments and individual management control assessments in addition to the continuous monitoring addressed by OMB.

Deleted

- Page 50, second full paragraph: "However, an attitude permeates CMO that CMO is exempt from controls that would be expected in other acquisition organizations because of its unique mission."

  Agency Comment: This comment is not only untrue and unsubstantiated, but unduly negative and vituperative. We insist upon its immediate removal.

Deleted

- Page 50, second full paragraph: "DARPA issues contracts, grants, and "other transactions," which total about $2.6 billion per year..."

  Agency Comment: The contracts, grants, and other transactions awarded by CMO total approximately $750 million per year. The rest of the agency funding is awarded by contracting agents in the military services, which were not subject to this audit.

Recommendation D.1 That the Director, Defense Advanced Research Projects Agency, revise Defense Advanced Research Projects Agency Administrative Instruction No. 37 to:

a. Clearly emphasize that the agency's unique mission increases the need for strong management controls.

b. Require managers to:

(1) Document the evaluations supporting vulnerability assessments.

(2) Document evaluations of the scope and extent of external reviews before using them as alternate management control reviews.

(3) Conduct supplemental management control reviews when the scope of external reviews are limited.

R. The Director, Defense Advanced Research Projects Agency, concurs in part. Each organization, regardless of mission, requires the same level of management control--management control which provides reasonable assurance. We do not believe it is reasonable or cost effective for DARPA to set, in regulation, a higher control standard because of its mission. Further, requiring managers to provide additional documentation on vulnerability assessments and external reviews used as alternative management control reviews is contrary to the spirit and intent of the new OMB guidance. The new guidance stresses continuous monitoring of internal controls, not periodic review and occasional control exercises. It also states that managers, when evaluating management controls, should draw upon existing documentation.

As an alternative to this recommendation, we propose to review DARPA Administrative Instruction No. 37 for compliance with the new OMB guidance and DoD Directive 5010.38, revising it as necessary.

Target Completion Date: September 30, 1997

Recommendation D.2 That the Director, Contracts Management Office, Defense Advanced Research Projects Agency:

a. Develop and implement a written plan for identifying and evaluating Contracts Management Office functional areas such as the issuance and administration of contracts, grants, cooperative agreements, and "other transactions" for future management control reviews.

R. We concur. The Director, CMO, will develop such a plan on CMO functional areas for future management control reviews.

Target Completion Date: December 31, 1997

b. Test acquisition management controls and document in Contracts Management Office management control files the results of the test.

R. We concur. We will test acquisition management controls and document the results to the extent that resources and time in FY 1997 will allow. We will maintain the agency's emphasis upon cost-effective management controls for results-oriented management. For CMO, results-oriented management means providing quality acquisition service to its technical clients, the program managers of DARPA.

Target Completion Date: December 31, 1997

c. Test corrective actions taken in response to external reviews to verify that desired results are achieved.

R. We concur. Within the constraints of a small staff and a large acquisition workload, CMO will test corrective action taken in response to this audit. This is the only external review which can reasonably be verified for all instrument types.

Target Completion Date: December 31, 1997

Final Report Reference

Appendix A. Scope and Methodology

Page 59

- Page 56, Management Control Program, Adequacy of Management Controls.

  Agency Comment: As noted in our agency comments on Finding D above, we do not accept many of the generalized assertions in the finding. We agree, however, to take many recommended actions to strengthen acquisition management controls. We concur with Recommendations A.2.d., B.1., B.2.g., B.2.h., C.2., C.3.a., and D.2. We concur in part with Recommendations A.1., and D.1., and have proposed alternative courses of action that will satisfactorily address those issues. Recommendations C.1.a. through C.1.e. are addressed to the DDR&E. We will assist in the implementation of the corrective actions adopted for these recommendations. In taking action to address all of these recommendations, we will hold firm to the principles of cost-effective management controls and reasonable assurance.

Audit Team Members

This report was prepared by the Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD.

Patricia A. Brannin
Raymond A. Spencer
Roger H. Florence
James F. Friel
Dora Yvonne Lee
Hezekiah Williams
Eva L. Daniel
Gary B. Dutton
Gary K. Smith
Carla D. Aikens
Tammy L. O'Deay