

OFFICE OF THE INSPECTOR GENERAL

COMPUTED TOMOGRAPHY SCANNER MAINTENANCE SERVICE CONTRACTS

Report Number 93-041

January 8, 1993

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The following acronyms are used in this report.

| AFB | Air Force Base |
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| CICA | Competition In Contracting Act |
| СТ | Computed Tomography |
| DPSC | Defense Personnel Support Center |
| DVA | Department of Veterans Affairs |
| FAR | Federal Acquisition Regulation |
| OEM | Original Equipment Manufacturer |



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

January 8, 1993

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT) ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER) INSPECTOR GENERAL, DEPARTMENT OF THE ARMY DIRECTOR, DEFENSE LOGISTICS AGENCY

SUBJECT: Report on Computed Tomography Scanner Maintenance Service Contracts (Report No. 93-041)

We are providing this final report for your information and use. This report resulted from a DoD Hotline allegation that maintenance service contracts for computed tomography scanners were awarded without full and open competition. Comments from the Assistant Secretary of Defense (Health Affairs), the Army, the Navy, the Air Force, and the Defense Logistics Agency on a draft of this report were considered in preparing the final report.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly; therefore, we request comments from the Assistant Secretary of Defense (Health Affairs), the Army, the Navy, and the Air Force on the unresolved recommendations by March 9, 1993. See the Response Requirements per Recommendation in Part II. The directive also requires that comments indicate concurrence or nonconcurrence in the finding and each recommendation addressed to you. If you concur, describe the corrective actions taken or planned, the completion dates for actions already taken, and the estimated dates for completion of planned actions. If you nonconcur, you must state your specific reasons for each nonconcurrence. If appropriate, you may propose alternative methods for accomplishing desired improvements. If you nonconcur with the estimated monetary benefits or any part thereof, you must state the amount with which you nonconcur and the basis for your nonconcurrence. Recommendations are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment.

The courtesies extended to the audit staff are appreciated. If you have any questions on this report, please contact Mr. Salvatore D. Guli at (703) 692-3025 (DSN 222-3025) or Ms. Macie J. Rubin at (703) 692-3222 (DSN 222-3222). Appendix G lists the planned distribution of this report.

Robert / Liebe

Robert J. Lieberman Assistant Inspector General for Auditing

cc: Secretary of the Army Secretary of the Navy Secretary of the Air Force Director of Defense Procurement Comptroller of the Department of Defense The Surgeon General, Department of the Army Chief, Bureau of Medicine and Surgery, Department of the Navy Surgeon General of the Air Force Inspector General, Department of Veterans Affairs

Office of the Inspector General, DoD

Audit Report No. 93-041 (Project No. 2CD-8006)

January 8, 1993

COMPUTED TOMOGRAPHY SCANNER MAINTENANCE SERVICE CONTRACTS

EXECUTIVE SUMMARY

Introduction. We performed this audit in response to a DoD Hotline allegation that maintenance service contracts for computed tomography (CT) scanners were awarded without full and open competition. DoD is currently expending approximately \$9 million for CT scanner maintenance service annually. This expenditure will increase each year and is projected to be about \$12 million in FY 1998. We coordinated this audit with personnel of the Inspector General, Department of Veterans Affairs (DVA) because they had received a similar complaint in 1991.

Objectives. The audit objectives were to determine whether CT scanner maintenance service contracts were awarded in compliance with established criteria, and whether adequate internal controls were in place and were followed. We expanded the scope to determine whether it would be beneficial for DoD to perform CT scanner maintenance service in-house.

Audit Results. The audit confirmed the allegation that DoD awarded CT scanner maintenance service contracts without full and open competition because of bid restrictions in the procurement process. In addition, use of in-house maintenance would be preferable.

Internal Controls. Internal controls were not effective to ensure adequate competition for CT scanner maintenance service contracts. We consider the internal control weaknesses to be material. The internal controls reviewed are detailed in Part I, and the internal control weaknesses are described in Part II of this report.

Potential Benefits of Audit. We estimated that DoD could achieve monetary benefits of about \$24 million by improving competition in the acquisition of maintenance service for CT scanners. Additional potential monetary benefits ranging from \$7 million up to \$15 million may occur if DoD performed CT scanner maintenance service in-house. Additional benefits may result if DoD establishes agreements with the DVA to share CT scanner maintenance service. Furthermore, in-house CT scanner service can improve patient services and DoD war readiness capability. The potential benefits are summarized in Appendix E. Summary of Recommendations. We recommended that DoD eliminate bid restrictions on CT scanner maintenance service contract solicitations to improve competition, perform cost benefit analysis before deciding on in-house versus contract maintenance, and establish CT scanner maintenance service sharing agreements between the Military Departments and DVA.

Management Comments. The Assistant Secretary of Defense (Health Affairs), the Army, the Navy, and the Defense Logistics Agency agreed that procedures need to be revised to eliminate sole-source contracts and to improve competition for CT scanner The Air Force did not agree with separating maintenance. maintenance options from the purchase of CT scanners. The Assistant Secretary of Defense (Health Affairs) and the Air Force did not concur with the recommendation to begin in-house maintenance and stated that a cost benefit analysis should be The Army proposed an alternative to the first. done recommendation in which a comprehensive review of CT scanner The Army maintenance service alternatives will be performed. initiated a review of all CT scanner maintenance. We have changed our recommendations to reflect the concerns expressed in The Assistant Secretary of Defense (Health the comments. Affairs) and the Air Force provided alternative estimates of monetary benefits to be gained from elimination of sole-source agree with their revised contracts for maintenance. We calculations. A summary of the management comments is in Part II and the complete text of the management comments is in Part IV of the report.

We request that the Assistant Secretary of Defense (Health Affairs), the Army, the Navy, and the Air Force provide comments to this final report by March 9, 1993.

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This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD. Copies of the final report can be obtained from the Secondary Reports Distribution Office, Audit Planning and Technical Support Directorate (703) 614-6303 (DSN 224-6303).

PART I - INTRODUCTION

Background

We performed this audit in response to a DoD Hotline referral alleging that solicitations for service maintenance contracts for the computed tomography (CT) scanner contained bid restrictions.

A CT scanner is a computerized X-ray system that produces three-dimensional X-ray images for physician diagnostic purposes. DoD has CT scanners in 68 of its 179 hospitals. Currently, 78 scanners are in service and DoD plans to place an additional 11 in service over the next 3 years.

Original equipment manufacturers (OEMs) or CT scanner maintenance service companies service most of the CT scanners and other highcost technological diagnostic equipment in DoD hospitals. Maintenance service contracts annually averaged about \$124,000 per CT scanner on sole-source contracts and \$70,000 per CT scanner on competitive contracts and will total approximately \$9 million for 1992 (see Appendix A).

<u>Objectives</u>

The audit objectives were to determine whether CT scanner maintenance service contracts were awarded in compliance with established criteria and whether adequate internal controls were in place and were followed. We expanded the scope to determine the suitability of servicing the CT scanners in-house. We coordinated with the Department of Veteran Affairs (DVA) on the feasibility of sharing CT scanner maintenance services. The DVA received a similar referral on CT scanner contracts in 1991 and issued a report on CT scanner contracts (See Part I, Prior Audits and Other Reviews).

Scope

<u>Documents reviewed</u>. We reviewed maintenance service contract documents, maintenance service records, and material and labor records for hospitals performing in-house CT scanner maintenance service. We were unable to locate a central source within DoD that had a complete listing of all CT scanners. Therefore, we qualified our report to the extent that we may not have identified all serviceable CT scanners in service at DoD hospitals.

We identified 78 CT scanners in DoD hospitals. Four of these scanners are new and still under the manufacturer's warranty. One scanner was serviced by in-house DoD personnel and 73 were under maintenance service contracts with an estimated total contract value of \$9 million. We reviewed contracts with costs applicable to FY 1992 for 36 of the 73 CT scanners. We reviewed requests for proposal, business clearance memorandums, and negotiation memorandums. We reviewed the 36 contracts and supporting contract documentation to estimate CT scanner maintenance service costs and to determine whether the contracts or contract documents contained any bidding restrictions.

We also reviewed procurement documents for CT scanners under request for proposal DLA120-91R-1522 at the Defense Personnel Support Center (DPSC). This procurement is for the purchase of 60 CT scanners over the next 3 years. We reviewed the procurement to determine the estimated quantity of scanners being purchased, to determine the estimated cost of CT scanner maintenance service options, and to determine whether the CT scanners were new purchases or replacements of existing CT scanners.

<u>Maintenance service records</u>. We reviewed CT scanner maintenance service records at four DoD hospitals to determine the quality of CT scanner maintenance service provided by OEMs and other maintenance service companies. We reviewed records for CT scanner maintenance service calls, patient scheduling and rescheduling, material usage, and labor hours.

We interviewed personnel responsible for CT scanner maintenance service at a private-sector health maintenance organization to determine cost associated with in-house maintenance.

<u>Material and labor records</u>. We reviewed historical cost and labor records for the sole CT scanner maintained by Air Force inhouse personnel. We reviewed the records from the time the Air Force began in-house CT scanner maintenance service in October 1990 through April 1992. We also obtained records from two DVA hospitals that did in-house maintenance. The records reviewed covered the period from 1985 through February 1992. We reviewed the Air Force and DVA records to determine the labor and material cost of performing CT scanner maintenance service in-house.

<u>Audit period, standards, and locations</u>. We performed this economy and efficiency audit from January through August 1992 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included such tests of internal controls as were considered necessary. We did not rely on any computerized data to perform the audit. See Appendix F for activities visited or contacted.

Internal Controls

Our review was limited to an evaluation of internal controls related to the procurement of CT scanner maintenance service. Therefore, we are not expressing an opinion on the adequacy and compliance of any other internal controls or the Defense Logistics Agency implementation of the Federal Managers' Financial Integrity Act.

We reviewed the internal control procedures for ensuring that:

o solicitations did not contain unnecessary restrictive provisions that excluded qualified bidders,

o all responsible sources were permitted to compete, and

o the exercise of contract options was the most advantageous method for fulfilling the Government's need.

The audit identified material internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. Controls were not Competition in with the effective to ensure compliance Contracting Act (CICA), as implemented in the Federal Acquisition Regulation (FAR) part 6, during the procurement of CT scanner maintenance service. Also, the DPSC contracting procedures did not ensure adequate competition for CT scanner maintenance service contracts. Recommendations 1. and 2. in this report, if implemented, will correct the weaknesses. We determined that potential monetary benefits of about \$24 million can be realized by implementing these recommendations. A copy of this report is being provided to the senior officials responsible for internal controls within the Military Departments and the Defense Logistics Agency.

Prior Audits and Other Reviews

The Office of the Inspector General, Department of Veterans Affairs, Report No. 1PE-E02-073 (Amended), "Special Review of the Picker \mathbf{CT} Scanner," Service Contracts for VA's September 30, 1991, found that 21 of 36 CT scanner maintenance service contracts awarded to Picker Corporation contained The report also stated that CT restrictive specifications. scanner maintenance service contracts were generally awarded to lower-priced CT scanner maintenance service contractors when contracts did not contain restrictive specifications. It was recommended that the Deputy Assistant Secretary for Facilities develop and use nonrestrictive specifications in solicitations for servicing Picker CT scanners. The Deputy Assistant Secretary for Facilities agreed to the recommendations.

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PART II - FINDING AND RECOMMENDATIONS

COMPUTED TOMOGRAPHY SCANNER MAINTENANCE SERVICE CONTRACTS

Maintenance costs for CT scanners were excessive. Excessive maintenance costs were incurred because competition restrictions resulted in sole-source awards and because DoD hospitals did not weigh the economic benefits of using in-house personnel to maintain CT scanners. We estimated that increased competition could have potential monetary benefits of about \$24 million in FYs 1994 through 1998. This benefit represents 35 percent of the ire of \$66.9 million for CT scanner if purchased without full and open anticipated expenditure of maintenance service Further monetary benefits that range from competition. \$7 million to \$15 million are possible by converting to in-house maintenance service of CT scanners.

DISCUSSION OF DETAILS

CT scanner maintenance service contracts are subject to the requirements of the CICA, FAR subpart 6.1, "Full and Open Competition," and FAR part 10, "Specifications, Standards, and Other Purchase Description." The CICA and FAR subpart 6.1 require full and open competition for the procurement of CT scanner maintenance service and supplies. To comply with the CICA and the FAR, all responsible bidders must be permitted to bid on a contract solicitation. Paragraphs (c)(3) and (d)(1) of FAR 17.207, "Exercise of Options," require the contracting officer to determine if the exercise of the option is the most advantageous method of fulfilling the Government's need, or if a new solicitation would produce a better price. FAR subpart 10.002, "Policy," permits the contract solicitation's statement of work specifications to, "...include restrictive provisions or conditions only to the extent necessary to satisfy the minimum needs of the agency or as authorized by law."

Reasons for Sole-Source

As of January 31, 1992, DoD had awarded approximately 73 maintenance service contracts for CT scanners. Of the 36 contracts examined, our review found that 27 were awarded without full and open competition (see Appendix A). Of the 27 contracts, 19 were options that were awarded without full and open competition. Of the 27 contracts, 8 were found to have unnecessary restrictions that exceeded the needs of the agency in the statement of work.

<u>CT scanner maintenance service options</u>. FAR subpart 6.1 requires, "...that contracting officers shall promote and provide for full and open competition in soliciting offers and awarding Government contracts." The FAR also states that, "full and open competition means that all responsible sources are permitted to compete." We determined that this FAR requirement was not met

contract options for contracts that contained 19 for Δ The contracts were awarded by DPSC. The maintenance service. requirement was not met at the time the contracts were awarded or at a later time when the contract options were exercised because service companies, other than OEMs, did not have an opportunity to compete for the contract. Service companies were not afforded an opportunity to compete because the solicitations required that the offerer provide both CT scanners and the maintenance service for the scanners. Service companies could not compete by bidding these solicitations because they could not satisfy both hardware and service maintenance requirements.

DPSC exercised the contract maintenance options, stating that the options were the most advantageous methods for fulfilling the needs of the Government. However, DPSC made this determination without soliciting all responsible sources to obtain competition for CT scanner maintenance services. In order to exercise the options, DPSC supported the price as reasonable by using the bid price of another OEM. For example, on contract DLA120-89-C-8043, DPSC exercised a CT maintenance service option and justified competition by stating that another OEM offered a higher price for the same option. However, no other service companies were solicited for price competition. Also, the OEM that offered the higher price offered a price for servicing a different brand of scanner.

Factory training restriction. In our review of CT scanner maintenance service contracts/solicitations at DoD hospitals, we found a specification in the statements of work that required CT scanner maintenance service technicians to be factory trained. Further, statements of work in contracts F11623-88-C-0053 and F49642-88-D-0059 required factory training on a specific CT scanner make and model.

We found CT scanner maintenance service technicians who were not factory trained performing satisfactory maintenance service at DoD and DVA hospitals. These technicians were trained at nonfactory schools, such as the Radiological Service Training Institute in Cleveland, Ohio, and R Squared Scan Systems, in Corona, California. We concluded that DoD Incorporated, hospital bid solicitations that contained a statement of work requirement for factory training were restrictive because they The Office of the eliminated other responsible bidders. Inspector General, DVA, came to a similar conclusion in its review of CT scanner maintenance service contracts; and DVA initiated action to eliminate restrictions to competition in DVA contracts.

Software restriction. Contracts F08651-91-D-0001 and F11623-88-C-0053 contained software restrictions that required the contractor to possess the license to hold and use the manufacturer's copyrighted diagnostic software. We found that licensing requirements for diagnostic software were not essential to perform diagnostic functions. We concluded that DoD hospital

bid solicitations that contained a statement of work requirement for diagnostic software licensing were restrictive because they eliminated other responsible bidders and were not necessary to meet the minimum needs of the procuring agency.

Cost of Sole-Source Contracts

Our review showed that the average cost of contracts awarded without competition for CT scanner maintenance service was 76 percent greater (\$124,196 versus \$70,478) than the cost of contracts awarded competitively (see Appendix A). For example, DoD paid an OEM \$127,700 for a 1-year maintenance contract (not including replacement tubes) for a General Electric 9800 CT scanner at Wilford Hall Medical Center, Lackland Air Force Base (AFB), Texas. In comparison, DoD paid \$58,800 on a competitively awarded contract to a third-party service company for the same model located at the Brooke Army Medical Center, Fort Sam Houston, Texas. We calculated that DoD could save as much as \$24 million over the next 6 years if all barriers to full and open competition were removed. Appendix B provides the details of these potential monetary benefits.

In-house CT Scanner Maintenance Service

DoD hires and trains hospital equipment repair personnel to maintain and repair equipment ranging from beds and intravenous pumps to X-ray machines. Other hospital low-density, hightechnology medical equipment, such as CT scanners, gamma cameras and computers, ultrasound, and specialized X-ray machines, can also be maintained by hospital equipment repair personnel. However, most DoD personnel have not been trained to do the work. Many DVA medical centers already perform CT scanner maintenance service in-house. The issues relating to the potential use of in-house DoD repair personnel concern the quality of repair service, the cost of in-house servicing, and the potential DoD and DVA maintenance sharing arising from benefits arrangements.

CT Scanner Maintenance Service Quality

During the audit, it was alleged that maintenance service quality problems would arise if DoD used third-party service companies or in-house maintenance service for CT scanners rather than OEM maintenance service. We reviewed the maintenance service quality at several DoD hospitals and concluded that the allegation could not be substantiated. Further, we found no pattern to the level of maintenance service quality whether the service was provided by OEM, by a third-party service company, or by in-house technicians.

For example, in examining the maintenance service records at the Womack Army Community Hospital at Fort Bragg, North Carolina, we found that the medical center used both OEM and third-party contractors to service its CT scanner. We found evidence that the hospital had experienced quality problems with both the OEM and third-party service contractor.

AFB, Keesler Center at Keesler Medical We visited the This medical center had the most expensive OEM CT Mississippi. scanner maintenance service contract within the DoD. We found that the medical center was not satisfied with the OEM CT scanner For several months the CT scanner had maintenance service. experienced imaging problems, but the OEM had not corrected these problems.

We also contacted the 22nd Strategic Hospital at March AFB, California, and discussed the CT scanner maintenance performed in-house with one of the two CT scanner technicians. The technician praised the in-house personnel on the maintenance service. The technician's praise centered on the quick response time of the CT maintenance personnel.

Cost of DoD Performing In-house CT Scanner Maintenance Service

DoD personnel can perform CT scanner maintenance service at costs significantly lower than the costs of contracted service. The costs for DoD to competitively obtain CT scanner maintenance service by contract over the next 5 years (1994 through 1998) would be \$43 million. We estimate that DoD could reduce costs by \$7 million to \$15 million over the next 6 years if DoD personnel are hired and trained to perform CT scanner maintenance service. These estimates are based on information on current requirements for CT scanners provided by the Assistant Secretary of Defense (Health Affairs) and in-house cost estimates computed by the Air Force Medical Logistics Office.

Appendix B provides details of 6-year contract costs, and Appendix C provides the details for the potential annual monetary benefits from use of in-house CT scanner maintenance service. Monetary benefits may be greater in instances where DoD and DVA can share CT scanner maintenance service within a local area or in instances where comparisons are made to noncompetitive contracts.

DoD and Department of Veterans Affairs Sharing Agreements

At present, each military hospital has its own CT scanner maintenance service contract even though two or more DoD and DVA hospitals with CT scanners may be in the same city. Economies of scale savings will occur if CT scanner maintenance service contracts covered more than one CT scanner in a region regardless of which Military Department manages the hospital. Similar economies of scale savings would occur if in-house maintenance personnel could service multiple CT scanners in a region. We have identified 20 areas that have 2 or more DoD or DoD and DVA CT scanners within a 50-to-100-mile radius (see Appendix D). In the Washington, D.C., area, for example, 4 DoD hospitals have 10 CT scanners and a DVA medical center has 1 CT scanner. These hospitals could share CT scanner maintenance service.

DVA 14 at in-house maintenance incorporated DVA already One of these DVA hospitals is located near DoD hospitals. hospitals and could readily begin sharing CT scanner maintenance The DVA Medical Center in Seattle, Washington, is service. located near the Navy Hospital, Brementon, and the Madigan Army Medical Center, Tacoma. If it is not economical to use in-house maintenance for servicing CT scanners in a particular location with multiple scanners then, at a minimum, a joint DoD and DVA maintenance service contract should be awarded to cover the multiple scanners.

<u>Conclusion</u>

DoD can obtain CT scanner maintenance service by sole-source contracting, competitive contracting, or by performing the maintenance service in-house. As shown in Appendix B, potential monetary benefits of about \$24 million could be realized in the next 6 years if DoD awards competitive contracts instead of solesource contracts. DoD can achieve additional monetary benefits of \$7 to \$15 million over the next 6 years if it begins in-house servicing of CT scanners. Monetary benefits may increase as the use of CT scanners becomes a standard for medical practice and as additional CT scanners are procured for hospitals and clinics. Currently, DoD is using maintenance service contracts to maintain other hospital equipment such as magnetic resonance imaging We believe that DoD scanners and nuclear medicine equipment. will achieve even greater monetary benefits through economies of scale when it uses competitively awarded contracts and in-house maintenance personnel to service a wide range of its medical equipment.

In-house CT scanner service will not only decrease costs to DoD, but it will also improve patient services and improve DoD war Patient services and the number of readiness capability. patients a CT scanner can handle will improve by decreasing CT readiness scanner maintenance service response time. War capability will improve by having trained CT maintenance service technicians available when mobile CT scanners are deployed to field hospitals. An example of this need was highlighted during Operation Desert Storm. Two mobile CT scanners were deployed to a field hospital in Saudi Arabia; however, the Army had no one to perform maintenance service on the CT scanners. Consequently, the Army had to send DoD employees to school to learn how to This example shows that DoD needs maintain CT scanners. adequately trained personnel to perform field maintenance of CT scanners in a combat environment.

Other hospitals have recognized the need to become more efficient by incorporating in-house maintenance service of CT scanners. For example, the DVA Medical Center in Minneapolis, Minnesota, has reported savings of \$707,000 in 7 years of servicing its CT scanners in-house. We believe DoD could experience similar benefits and increased efficiency by performing CT scanner maintenance in-house.

RECOMMENDATIONS, MANAGEMENT COMMENTS, AND AUDIT RESPONSE

1. We recommend that the Commander, Defense Personnel Support Center open solicitations for the computed tomography scanner maintenance service to all responsible bidders.

The Defense Logistics Agency (DLA) <u>Management comments.</u> partially concurred with this recommendation, stating that they will issue a "test" solicitation for maintenance services by November 1993 in lieu of soliciting for an entire systems acquisition. The Assistant Secretary of Defense (Health Affairs) concurred and stated that increased attention must occur to strengthen the option evaluation process to ensure that other than OEM maintenance options are considered prior to exercising The Army stated that they initiated a maintenance options. all CT scanner maintenance service contract review of specifications with an expected completion date of October 1, The Navy concurred and stated that full and open 1994. competition should be used in contracting for maintenance services. The Air Force nonconcurred, stating that the Air Force specifically requested maintenance options with the purchase of each scanner because this is the only contracting method that can yield true life-cycle cost evaluation of the system.

<u>Audit response</u>. The actions taken by DLA are responsive to the intent of the recommendation, and the DLA "test" will address the concerns expressed by the Air Force. Accordingly, additional comments are not required.

2. We recommend that The Surgeon General, Department of the Army; Chief, Bureau of Medicine and Surgery, Department of the Navy; and the Surgeon General of the Air Force:

a. Write a blanket statement of work for computed tomography scanner maintenance service contracts that does not contain restrictions to competition. This statement of work should then be used for all DoD computed tomography scanner maintenance service contracting.

b. Establish procedures for hospitals and medical centers that have computed tomography scanners to perform a cost-benefit analysis before awarding or renewing service maintenance contracts to determine if maintenance can be performed more costeffectively in-house, and use if needed, the results of the analysis to support requests for additional personnel.

<u>Revised Recommendation.</u> Draft report Recommendation 2. was renumbered 2.a. for this report. Based on comments from the Assistant Secretary of Defense (Health Affairs) and the Military Departments, draft report Recommendations 3.a. and 3.b., concerning initiation of in-house computed tomography service, were revised and redirected from the Assistant Secretary to the Military Departments as Recommendation 2.b.

<u>Management comments</u>. The Assistant Secretary of Defense (Health Affairs) concurred with Recommendation 2.a. The Army concurred with Recommendation 2.a. and stated that the Office of the Surgeon General initiated a joint task force to develop mandatory specifications for CT scanner maintenance service contracts to preclude bidding restrictions. The planned completion date of the Army task force work was December 31, 1992. The Navy did not provide comments to Recommendation 2.a. The Air Force concurred with Recommendation 2.a.

<u>Audit response</u>. For Recommendation 2.a., we request that the Navy provide written comments, and that the Air Force identify its planned actions and a completion date for the actions. We also request that the Army, Navy, and Air Force provide written comments to Recommendation 2.b.

3. We recommend that the Assistant Secretary of Defense (Health Affairs):

a. Appoint Executive Agents within the Military Departments for each geographic region with two or more scanners.

b. Require Executive Agents to perform cost analyses and provide for one maintenance contract for multiple computed tomography scanners where cost-effective.

c. Provide the Department of Veterans Affairs the list of Executive Agents and establish sharing agreements for joint Department of Veterans Affairs and DoD contracts or in-house maintenance where cost-effective.

Revised Recommendations. Based on the comments received from the Assistant Secretary of Defense (Health Affairs) and discussions with the Air Force, we have added new Recommendations 3.a. and 3.b. We also revised Recommendation 3.c., which originally recommended the Military Departments and Department of Veterans Affairs establish sharing for in-house and contracted CT scanner maintenance service.

<u>Management comments</u>. The Assistant Secretary of Defense (Health Affairs) concurred with draft report Recommendation 3.c. to establish sharing agreements between Military Departments and between the Department of Veterans Affairs and Military Departments for in-house and contracted CT scanner maintenance. The Assistant Secretary further stated that development of a joint blanket statement of work for CT scanner maintenance and the sharing of maintenance contracts can be explored under existing interagency agreements. The Air Force concurred with the intent of the recommendation. <u>Audit response</u>. We request that the Assistant Secretary of Defense (Health Affairs) provide comments on Recommendations 3.a. and 3.b.

<u>Deleted Recommendation</u>. Based on subsequent discussions with the Air Force, we have deleted draft report Recommendation 4., which recommended that DoD weigh the benefits of expanding in-house maintenance to other high-cost hospital diagnostic equipment.

<u>Management Comments on Monetary Benefits</u>. The Assistant Secretary of Defense (Health Affairs) provided revised quantities for CT scanners that will be available through 1998 and agreed that about \$21 million of costs would be avoided through use of competitive contracting for maintenance service of CT scanners. The Air Force stated that use of full and open competition for service contracts results in savings of 35 percent or about \$6.3 million for the Air Force.

The Assistant Secretary of Defense (Health Affairs), the Army and the Air Force stated that the monetary benefits from use of inhouse personnel to perform maintenance of CT scanners understated the costs. Further, they stated the report did not recognize the Office of Management and Budget and DoD requirement to perform a study to determine if an activity or function should be performed in-house or on contract. Each hospital commander must make the decision regarding the optimal mix of in-house and contract services.

We revised the report, recommendations, and Audit Response. estimated monetary benefits shown in Appendices B and C based on We decreased the comments and the updated information provided. the monetary benefits attributed to competition, based on decreased numbers of CT scanners, and revised the monetary То benefits to the amount shown by the Assistant Secretary. reflect the comments of the Assistant Secretary and the Air Force, we also revised costs and put in a range of monetary benefits that could be achieved from use of in-house personnel for maintenance of CT scanners. We recognize the need for each hospital or medical center commander to decide whether to perform we revised contract. Accordingly, on in-house or work Recommendation 2.b. to reflect the need for a cost-benefit analysis prior to making the decision to perform maintenance inhouse or by contract. We request comments from the Army and Navy on monetary benefits from use of competitive contracts for CT scanner maintenance and the Army, Navy, and Air Force on the potential monetary benefits from use of in-house personnel for CT scanner maintenance.

<u>Management Comments on Finding</u>. The Assistant Secretary of Defense (Health Affairs) stated that the report lacked objective information needed to compare the three forms of maintenance service and anecdotal reports from three locations do not represent a statistically valid sample from which to draw conclusions about the effectiveness of the different forms of maintenance service.

The DLA commented that the audit did not adequately establish excessive costs because of competition restrictions. Further, the differences in costs of compared contracts could have been due to other factors such as response time, types of systems, coverage of ancillary components, and location of hospital. An example of the maintenance service contract on the system at the Naval Hospital, San Diego, CA included ancillary components and other equipment. Finally, the DLA stated the audit did not include data reflecting any savings available through total system acquisition as opposed to the separate purchase of system components.

Audit Response. We agree with the Assistant Secretary's comment that reports from three locations do not represent a statistically valid sample. However, we were not able to substantiate claims that third-party service companies or inhouse maintenance adversely affected the quality of service.

Our review of comparable contracts found common factors such as response times, coverage of ancillary and other components, types of systems, and locations of hospitals. Our review of the price negotiations memorandums for the two CT scanners at the San Diego Naval Hospital found that the extended warranty procedures contained in the contract far exceeded normal commercial practices, the requirements for biweekly maintenance service and a twenty-four hour repair capability exceeded normal commercial The contracting officer determination of competition agreements. service other that since service stated maintenance for organizations offer long-term maintenance agreements, pricing is established in a competitive arena. The proposed award price is roughly a seven percent increase over the normal commercial warranty rate, but the price offered was determined to be fair and reasonable by the contracting officer. The maintenance service contracts that were reviewed were not awarded as a total system acquisition. The equipment contracts were awarded for CT scanners only and the service maintenance was not considered when determining the lowest bidder.

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| <u>Number</u> | <u>Addressee</u> | Nonconcur | Action | Date | Issues* |
| 2.a. | Army Navy Air Force | х | x | x x | M M |
| 2.b. | Army Navy Air Force | X X X | X X X | x x x | M M M |
| 3.a. | ASD (HA) | х | Х | X | |
| 3.b. | ASD (HA) | Х | х | X | |

RESPONSE REQUIREMENTS PER RECOMMENDATION

*****M = Monetary benefits

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PART III - ADDITIONAL INFORMATION

- APPENDIX A Computed Tomography Scanner Maintenance Service Contracts
- APPENDIX B Computation of Contract Maintenance Service Costs
- APPENDIX C Computation of In-house Maintenance Service Costs
- APPENDIX D Locations of DoD and Nearby Department of Veterans Affairs Medical Centers Computed Tomography Scanners
- APPENDIX E Summary of Potential Benefits Resulting from Audit

APPENDIX F - Activities Visited or Contacted

APPENDIX G - Report Distribution

APPENDIX A - CONPUTED TOMOGRAPHY SCANNER MAINTENANCE SERVICE CONTRACTS

<u>Contracts With Tubes¹/</u>

| SOL | e-Source | | ч | <u>Competitive</u> | |
|--|--|------------------------|---|--------------------------------------|-------------------------------|
| Contract Number 1 | Location | Value | Contract Number | Location | Value |
| F11623-88-D-0053 | Andrews AFB Scott AFB | \$ 169,302 134,984 | F04626-90-C-0029 N00406-91-C-0684 Darfd-90-C-0356 | Travis AFB Bremerton Ft. Bradd | \$ 67,599 78,999 86,000 |
| F22600-91-C-0026 F08651-91-D-0001 N00612-90-C-0491 (| Keesier Ard Eglin AFB Charleston AFB | 173,046 157,969 | DABT39-91-C-4160 | Ft. Sill | 60,960 |
| DADA15-88-C-0127 | Walter Reed Ft. Bliss | 112,380 134,610 | | | |
| DLA120-88-C-8052 | Jacksonville | 198,8562/ | | | |
| | Ft. Gordon | 127,7802/ | | | |
| | Homestead AFB Tvndall AFB | 127,7804/ 127,7802/ | | | |
| Total | | \$1,690,427 | | | <u>\$293,558</u> |
| Average Cost Per | Scanner | \$ 153,675 | | | \$ 73,390 |

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APPENDIX A - CONPUTED TOMOGRAPHY BCANNER MAINTENANCE BERVICE CONTRACTS (cont'd)

<u>Contracts Without Tubes³/</u>

| SOL | e-Source | | Comp | etitive | |
|---------------------------|---|---|--|--|-------------------------------|
| <u>Contract Number</u> | Location | Value | Contract Number | Location | <u>Value</u> |
| DLA120-88-C-8052 | San Diego San Diego | \$ 172,471 2/ 172,471 2/ | F41613-89-C-0006 F41636-91-D-0009 N00189-91-C-0172 | Carswell AFB Lackland AFB Camp LeJeune | \$ 78,100 73,072 67,000 |
| DLA120-89-C-8043 | RAF Lakenheath Sheppard AFB | 93,704 <u>2</u> / 93,704 <u>2</u> / | DADA11-92-D-0001 DADA15-91-C-0046 | Ft. Sam Houston Walter Reed | 58,800 63,500 |
| | Ft. Stewart Gorgas Ft. Ord Nurnberg | 90,100 2/ 128,183 2/ 97,452 2/ 80,100 2/ | | | |
| 1910- W -00-10003W | Ft. Riley Heidelberg | 93,704 2/ 83,304 2/ 94,704 2/ | | | |
| DLA120-90-C-8084 | Pensacola Orlando Ft. Belvoir Offutt AFB | 105,024 2/ 105,024 2/ 104,000 2/ 72,000 2/ | | | |
| DADA15-89-C-0081 Total | Walter Reed | 76,932 \$1.662.877 | | 04 | \$340.472 |
| Average Cost Per | Scanner | \$ 103,930 | | v | \$ 68,094 |
| Total With And Wi | thout Tubes | \$3,353,304 | | | \$634,030 |
| Average With And | Without Tubes | \$ 124,196 | | •• | \$ 70,448 |

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APPENDIX A - COMPUTED TOMOGRAPHY SCANNER MAINTENANCE SERVICE CONTRACTS (cont'd)

<u>**Estimated DoD Total Contract Cost</u></u></u>**

| | (58 X \$124,196) (19 X \$ 70,448) |
|---|---|
| Estimated DoD CT Scanner Contract Costa52 | \$7,203,368 1.338,512 \$8,541,880 |
| Estimate of DoD CT scanner <u>Contracts</u> 4/ | 58 (75% x 77) 19 (25% x 77) 778 |
| Percent of Total Contracts Reviewed | 75 25 |
| Total No. of Contracts Reviewed | sole-source <u>6</u> / 27 competitive ² / <u>9</u> <u>36</u> |

1/Replacement tubes included in maintenance service contract.

Replacement tubes not included in maintenance service contract. 2/Represents 1 of a total of 19 contract options.

4/Represents an estimate of the number of sole-source and competitive CT scanner service contracts based on review of 36 total contracts.

Represents an estimate of the total costs of CT scanner maintenance service contracts contracts in the universe by the average unit contract costs shown in page 18. computed by multiplying the prorated estimates of sole-source and competitive ને

Contract awarded to one source of supply no competition achieved. $\frac{6}{2}$ Contract awarded with full and open competition. $\frac{2}{2}$ One CT scanner is maintained in-house and is not included.

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COMPUTATION OF CONTRACT MAINTENANCE SERVICE COSTS APPENDIX B -

| FY FY FY FY <u>995 1996 1997 1998</u> Total | |
|--|---------|
| FY 1995 | ĊĊ |
| FY FY 993 1994 | |
| า ส | ugnee . |

Cost Avoidance for Contract Competition (\$000)

| rojected Contract Costs costs With Competition cost Avoidance | \$8,542 5,427 \$3,115 | \$10,110 6,510 \$ 3,600 | \$11,242 7,286 \$ 3,956 | \$12,162 7,912 \$ 4,250 | \$12,445 8,096 \$ 4,349 | \$12, 445 8,096 \$ 4,349 | \$ 66,946 43,327 \$ 23.6192/ |
|---|-----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|---------------------------------------|------------------------------------|
| ost Avoidance for In-how | ise Maint | enance Se | rvice Bas | ed on Air | Force Ca | lculation | / 2 (000\$) |
| cata with Commetition ^{4/} | | \$ 6,510 | \$ 7,286 | \$ 7,912 | \$ 8,096 | \$ 8,096 | \$ 37,900 |

<u>Cost Avoidance for In-house Maintenance Service Based on OIG. DoD Calculation</u>(\$000)

6,7315/

31,169

6,336

1,760

s

6,336 \$ 1,760 8,096

> 6,278 \$ 1,634

6,059 7,286

> 6,160 350

costs With Competition⁴/ In-house Costs³/

Cost Avoidance⁴/

S

\$ 1,227

\$ 7,912

\$ 6,510

| 37,900 22,424 15,476 <u>6</u> / |
|--|
| \$ 8,096 \$ 4,458 \$ 3,638 \$ |
| \$ 8,096 4,458 \$ 3,638 |
| \$ 7,912 4,357 \$ 3,555 |
| \$ 7,286 4,251 \$ 3,035 |
| \$ 6,510 4,900 \$ 1,610 |
| Costs With Competition In-house Costs Cost Avoidance |

L/Current requirements for CT scanners per Assistant Secretary of Defense (Nealth Affairs) 2/A 35-percent savings realized with competition (\$23,619/\$66,946).

2/(Details of in-house costs are in Appendix C.) 2/Costs avoidance for in-house maintenance service has not been calculated for 1993

since in-house maintenance service may not begin until 1994. 4/cost avoidance for in-house maintenance service has been calculated from figures supplied by the Air Force Medical Logistics Office and prorated over the current requirements for CT scanners.

2/The cost avoidance for in-house maintenance service has been calculated by OIG, DoD and over the current requirements for CT scanners.

The cost avoidance for in-house maintenance service was calculated by OIG, DoD and prorated over the current requirements for CT scanners. 6/m-

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| | FY <u>1994</u> | FY <u>1995</u> | FY <u>1996</u> | FY <u>1997</u> | FY <u>1998</u> | <u>Total</u> |
|---------------------------------------|--------------------------------|-----------------------------|--------------------------------|---------------------------------------|---------------------------------------|---|
| Number of CT Scanners <u>1</u> / | 80 | 83 | 86 | 88 | 88 | |
| Labor Fringes Parts Training | \$2,060 797 2,756 553 | \$2,137 827 2,860 | \$2,215 857 2,963 249 | \$2,266 877 3,032 <u>182</u> | \$2,266 877 3,032 <u>182</u> | \$10,944 4,235 14,643 <u>1,421</u> |
| Total ^{2/} | \$6,166 | <u>\$6,079</u> | <u>\$6,284</u> | <u>\$6,357</u> | <u>\$6,357</u> | <u>\$31,243</u> |

Air Force In-House Calculation(\$000)

APPENDIX C - COMPUTATION OF MAINTENANCE SERVICE COSTS

IG, DoD Calculation(\$000)

| | 1 | 994 | | <u>1995</u> | - | <u>1996</u> | - | <u>1997</u> | | <u>1998</u> | | <u>Total</u> |
|---------------------------------------|----------------|--------------------------|------------|---------------------------|------------|---------------------------|------------|---------------------------|------------|---------------------------|------------|----------------------------------|
| Number of CT Scanners1/ | | 80 | | 83 | | 86 | | 88 | | 88 | | |
| Labor Fringes Parts Training | \$ 2, 1, | 807 312 757 024 | \$ | 845 327 ,859 220 | \$ | 869 336 ,932 220 | \$ | 889 344 ,005 220 | \$ | 889 344 ,005 220 | \$ | 4,299 1,663 4,558 1,904 |
| Total ^{3/} | <u>\$4</u> | <u>900</u> | <u>\$4</u> | <u>,251</u> | <u>\$4</u> | <u>,357</u> | <u>\$4</u> | <u>,458</u> | <u>\$4</u> | <u>,458</u> | <u>\$2</u> | 2,424 |

1/Quantities provided by the Assistant Secretary of Defense (Health Affairs); see comments in Part IV.

2/We computed the Air Force in-house costs based on requirements provided by the Assistant Secretary of Defense (Health Affairs). For details of labor, fringes, parts, and training see Air Force comments in Part IV.

3/We computed our in-house costs based on requirements provided by the Assistant Secretary of Defense (Health Affairs). The details of labor, fringes, parts, and training are as follows:

Labor Costs. We obtained labor cost information from four hospitals that perform CT scanner maintenance service in-house: the 22nd Strategic Hospital, March AFB, California; the DVA Medical Center in Minneapolis, Minnesota; the DVA Medical Center in Little Rock, Arkansas; and a commercial hospital in a city with the highest medical costs in the United States.

The 22nd Strategic Hospital maintained its CT scanner by using military enlisted personnel in pay grades E-4 and E-5. The hospital has expended 166 labor hours servicing its CT scanner since 1990. The two DVA medical centers used GS-10 and GS-11 federal civilian employees and expended 368 labor hours per year

<u>APPENDIX C - COMPUTATION OF IN-HOUSE MAINTENANCE SERVICE COSTS</u> (cont'd)

per CT scanner at Minneapolis and 439 labor hours per year per CT scanner at Little Rock. The commercial hospital paid an average salary of \$47,700 or \$22.93 per hour to its personnel who provided maintenance service for its CT scanners.

We used the commercial hospital's average salary and the labor hours expended by the DVA Medical Center, Little Rock, to calculate the labor cost for in-house work in the DoD. We used this salary and hours because it should be close to the highest the DoD would incur. The annual labor cost of \$10,100 per scanner is calculated by applying the commercial hospital's hourly rate to the average hours incurred at the DVA Medical Center, Little Rock, (\$22.93 x 439 labor hours). During the period FY 1994 through FY 1998, in-house labor cost will approximate \$4.3 million.

The fringe benefit cost is based on a Fringe Benefit Costs. fringe benefit rate of 38.7 percent of labor costs. This rate was the most recent rate provided by the Office of Management and Budget in its Transmittal Memorandum No. 7 to Circular A-76 dated The rate is composed of retirement, 8, 1988. August security, percent; Medicare, 2.2 social 21.7 percent; miscellaneous, 4.7 percent; and insurance, 8.4 percent; 1.7 percent. We calculated that fringe benefits would amount to \$1.7 million over the 6-year period.

<u>Parts Costs</u>. We obtained cost information from the 22nd Strategic Hospital; the DVA Medical Center, Minneapolis; and the DVA Medical Center, Little Rock.

The 22nd Strategic Hospital incurred \$1,200 for replacement parts since they began servicing the CT scanner in-house in 1990.

The DVA Medical Center, Minneapolis, serviced two CT scanners in-house and incurred an average annual parts cost of \$11,046 per year per scanner. The DVA Medical Center has serviced one CT scanner in-house since 1985 and the other since 1988.

The DVA Medical Center, Little Rock, serviced a CT scanner in-house since 1985 and incurred an average parts cost of \$21,960 per year. The medical center experienced this high cost for parts because it replaced major components of the CT system. The disk drive for \$10,401 and the remote video module for \$20,000 are examples of high dollar parts replaced. To compute a conservative estimate for cost savings, we used the cost of parts incurred by the DVA Medical Center, Little Rock, the highest parts costs found during the audit. Accordingly, we estimated parts costs for in-house maintenance to be \$15 million for 1994 through 1998. APPENDIX C - COMPUTATION OF IN-HOUSE MAINTENANCE SERVICE COSTS (cont'd)

Training Costs. We estimated that it will cost \$12,800 to train an employee in CT scanner service. We based our estimate on training to be conducted at the Radiological Service Training Institute in Cleveland, Ohio, where a person will be trained on all models of CT scanners. We estimate that no more than one person needs to be trained for each scanner and one person may maintain more than one scanner. This estimate includes the cost of tuition, lodging and meals, and transportation. For the 6-year period, the training cost for in-house personnel will amount to \$1,904,000, which includes \$220,000 for 1997 and 1998 for possible employee attrition.

Total Costs. Our overall estimate is a benchmark. An accurate estimate of cost can only be determined by performing an analysis for each hospital or service area where the in-house CT scanner servicing will be performed. A separate analysis is necessary because of different conditions such as the current quantity of hospital biomedical technicians, the cost of wages in each area, and the geographical proximity to other DoD and DVA hospitals so that shared maintenance may be considered. This page was left out of original document

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APPENDIX D - LOCATIONS OF DOD AND NEARBY DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTERS COMPUTED TOMOGRAPHY SCANNERS (cont'd)

Number of <u>Scanners</u>

<u>Texas</u>

Brooke Army Medical Center, Ft. Sam Houston 2 3 Wilford Hall USAF Medical Center, Lackland AFB Darnall Army Community Hospital, Ft. Hood 1 1 DVA Medical Center, Temple 1 DVA Medical Center, Houston 1 DVA Medical Center, Dallas 1 Sheppard AFB 10 Subtotal DoD Hospitals With Potential CT Scanners: 1 Nassua Bay 1 Port Arthur 1 Houston 1 Galveston 1 Corpus Christi 1 El Paso 6 Subtotal 16 Total Southern California 22nd Strategic Hospital, March AFB 1 Navy Hospital, Camp Pendelton 1 Navy Hospital, San Diego 2 DVA Medical Center, Loma Linda 1 DVA Medical Center, Long Beach DVA Medical Center, W. Los Angeles 1 2 2 DVA Medical Center, San Diego 10 Subtotal DoD Hospitals with Potential CT Scanners: 1 Twentynine Palms Fort Irwin

Subtotal Total
<u>Florida</u>

| 56th Medical Center, MacDill AFB | 1 |
|----------------------------------|----|
| Naval Hospital, Jacksonville | 1 |
| DVA Medical Center, Tampa | 2 |
| DVA Medical Center, Miami | 2 |
| DVA Medical Center, Gainesville | 2 |
| Falin AFB | 1 |
| Tyrnall AFB | 1 |
| Subtotal | 10 |
| | |

DoD Hospitals With Potential CT Scanners:

| Pensacola | 1 |
|-----------|----|
| Orlando | 1 |
| Subtotal | 2 |
| Total | 12 |

National Capital Area

Walter Reed Army Medical Center, Washington, DC3Dewitt Army Hospital, Ft. Belvoir, VA1Malcom Grow USAF Medical Center, Andrews AFB, MD1National Naval Medical Center, Bethesda, MD3DVA Medical Center, Washington DC1Subtotal9

DoD Hospitals with CT Potential Scanners:

| Baltimore | 1 |
|-----------|----|
| Subtotal | 2 |
| Total | 11 |

<u>Northern California</u>

Total

| | 2 |
|--|---------------|
| Navy Hospital, Oakland David Grant USAF Medical Center, | 2 |
| Travis AFB | 1 |
| DVA Medical Center, Martinez Subtotal | <u> </u> |
| DoD Hospitals With Potential CT Scanners: | |
| Mather AFB | $\frac{1}{1}$ |
| Total | 5 |
| Arizona | |
| 832nd Medical Group, Luke AFB | 1 1 |
| DVA Medical Center, Phoenix | 1 |
| DVA Medical Center, Tucson | <u> </u> |
| Subtotal | <u>F</u> |
| DoD Hospitals With Potential CT Scanners: | |
| Ft. Huachuca | 1 |
| Subtotal | 5 |
| IUCAI | |
| <u>South Carolina</u> | |
| Moncrief Army Medical Center, Ft. Jackson | 1 |
| Naval Hospital, Charleston | 1 |
| DVA Medical Center, Columpia | 1 |
| Subtotal | 4 |
| DoD Hospitals With Potential CT Scanners: | |
| Beaufort | 1 |
| Subtotal | |

<u>Georgia</u>

Dwight D. Eisenhower Army Medical Center, Ft. Gordon 1 Winn Army Community Hospital, Ft. Stewart 1 DVA Medical Center, Augusta 1 DVA Medical Center, Dublin <u>1</u> Subtotal <u>4</u>

DoD Hospitals with Potential CT Scanners:

Ft. Benning Subtotal Total

<u>Illinois/Missouri</u>

| Great Lakes Naval Hospital | |
|--------------------------------|--|
| USAF Medical Center, Scott AFB | |
| DVA Medical Center, Chicago | |
| DVA Medical Center, St. Louis | |
| Total | |

Washington

Navy Hospital, Bremerton Madigan Army Medical Center, Tacoma DVA Medical Center, Seattle Subtotal

DoD Hospitals With Potential CT Scanners:

Seattle Oak Harbor Subtotal Total



1

5

1

1

<u>1</u> 3

Southern Virginia

| 1st Medical Group, Langley AFB Naval Hospital, Portsmouth DVA, Medical Center, Hampton Subtotal | 1 1 3 |
|--|-------------|
| DoD Hospitals With Potential CT Scanners: | |
| Ft. Eustis Ft. Lee Subtotal Total | 1 2 5 |
| <u>Colorado</u> | |
| Fitzsimons Army Medical Center, Aurora DVA Medical Center, Denver USAF Academy, Colorado Springs | 1 1 |

3

DoD Hospitals With Potential CT Scanners:

Ft. Carson Subtotal Total

Subtotal

<u>Kansas</u>

DoD

| Irwin Army Community Hospital, Ft. Riley | 1 1 |
|--|--------|
| Subtotal - | 2 |
| Hospitals With Potential CT Scanners: | |

Ft. Leavenworth Subtotal Total

<u>Oklahoma</u>

| DVA Medical | Center, | Oklahoma | City | 1 |
|-------------|---------|----------|------|---|
| Subtotal | | | | 1 |

DoD Hospitals With Potential CT Scanners:

Ft. Sill Subtotal Total

<u>Nebraska</u>

Ehrling Berquist Strategic Hospital, Offutt AFB DVA Medical Center, Omaha Total

1 1

2

2

<u>Mississippi</u>

| Keesler Medical Cénte | er, Keesler AFB |
|-----------------------|-----------------|
| DVA Medical Center, 1 | Biloxi |
| Total | |

<u>Alabama</u>

| Air University Regional Hospital, Maxwell AFB | 1 |
|---|---|
| DVA Medical Center, Montgomery | 1 |
| Subtotal | 2 |

DoD Hospitals With Potential CT Scanners:

Redstone Arsenal1Ft. Rucker1Ft. McClellan1Subtotal3Total5

<u>Kentucky</u>

| Treland Army Community Hospital | , Ft. Knox | 1 |
|---------------------------------|------------|---|
| DVA Medical Center, Louisville | | 1 |
| Total | | 2 |
| IOCUI | | |

<u>Ohio</u>

| USAF Medical Center, Wright-Patterson AFB | 1 |
|---|----------|
| DVA Medical Center, Dayton | |
| Total | |
| North Carolina | |
| Womack Army Community Hospital, Ft. Bragg | 1 |
| Camp Lejeune | 1 |
| DVA Medical Center, Durham | <u>1</u> |
| Subtotal | 3 |
| DoD Hospitals with Potential CT Scanners: | |
| Cherry Point | <u>1</u> |
| Subtotal | <u>1</u> |
| Total | 4 |
| Summary Totals | |

| Total | 112 |
|---------------------------|-----|
| Current DVA CT Scanners | 36 |
| Potential DoD CT Scanners | 27 |
| Current DoD CT Scanners | 49 |

APPENDIX E - SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT

| Recommendation <u>Reference</u> | Description of Benefit | Amount and/or Type of Benefit |
|------------------------------------|---|---|
| 1. | Economy and Efficiency. CT scanner maintenance service solicitations would be opened to all responsible bidders. | Operation and maintenance funds put to better use of \$23,619,000 for FY 1993 through FY 1998. (Army \$9,211,000; Navy \$6,141,000; Air Force \$8,267,000). |
| 2.a. | Economy and Efficiency. Statement of work for CT scanner maintenance service contracts would be written without bidding restrictions. | Included in amount for Recommendation 1. |
| 2.b. | Economy and Efficiency. Procedures for cost- benefit analysis would help medical facilities determine the feasibility of in-house servicing of CT scanners. | Operation and maintenance funds put to better use of \$6,657,000 for FY 1994 through FY 1998 (Army \$2,596,000; Navy \$1,731,000; Air Force \$2,330,000). |
| 3.a., 3.b., and 3.c. | Economy and Efficiency. Will result in sharing agreements between the Military Departments and the Department of Veterans Affairs for maintenance of CT scanners. | Monetary benefits can not be reasonably estimated. |

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APPENDIX F - ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Washington, DC Director of Defense Procurement, Washington, DC Assistant Secretary of Defense (Health Affairs), Washington, DC Assistant Secretary of Defense (Production and Logistics), Washington, DC

Department of the Army

Assistant Secretary of the Army (Financial Management), Washington, DC The Surgeon General, Department of the Army, Washington, DC Blanchfield Army Community Hospital, Fort Campbell, KY Brooke Army Medical Center, Fort Sam Houston, TX Darnell Army Community Hospital, Fort Hood, TX Dewitt Army Hospital, Fort Belvior, VA Fitzsimons Army Medical Center, Aurora, CO General L. Wood Army Community Hospital, Fort Leonard Wood, MO Ireland Army Community Hospital, Fort Knox, KY Irwin Army Community Hospital, Fort Riley, KS Martin Army Community Hospital, Fort Benning, GA Moncrief Army Community Hospital, Fort Jackson, SC Reynolds Army Community Hospital, Fort Sill, OK Silas B. Hayes Army Community Hospital, Fort Ord, CA Walter Reed Army Medical Center, Washington, DC William Beaumont Army Community Hospital, Fort Bliss, TX Winn Army Community Hospital, Fort Stewart, GA Womack Army Community Hospital, Fort Bragg, NC

Department of the Navy

Assistant Secretary of the Navy (Financial Management), Washington, DC Chief, Bureau of Medicine and Surgery, Washington, DC National Naval Medical Center, Bethesda, MD Navy Hospital, Bremerton, WA Navy Hospital, Camp Lejeune, NC Navy Hospital, Camp Pendleton, FL Navy Hospital, Charleston, SC Navy Hospital, Orlando, FL Navy Hospital, Pensacola, FL Navy Hospital, Portsmouth, VA Navy Hospital, San Diego, CA USS Comfort Naval Supply Center, Norfolk, VA

APPENDIX F - ACTIVITIES VISITED OR CONTACTED (cont'd)

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller), Washington, DC The Surgeon General of the Air Force, Washington, DC AFSC Regional Hospital Eglin, Eglin AFB, FL Air University Regional Hospital, Maxwell AFB, AL David Grant USAF Medical Center, Travis AFB, CA Ehrling Berquist Strategic Hospital, Offutt AFB, NE Keesler Medical Center, Keesler AFB, MS Malcolm Grow USAF Medical Center, Andrews AFB, DC Robert L. Thompson Strategic Hospital, Carswell AFB, TX Sheppard TTC Hospital, Sheppard AFB, TX USAF Academy Hospital, USAF Academy, CO USAF Hospital Tinker, Tinker AFB, OK USAF Medical Center Scott, Scott AFB, IL USAF Medical Center Wright-Patterson, Wright-Patterson AFB, OH Wilford Hall USAF Medical Center, Lackland AFB, TX 1st Medical Group, Langley AFB, VA 2nd Strategic Hospital, Barksdale AFB, LA 22nd Strategic Hospital, March AFB, CA 31st Medical Group, Homestead AFB, FL 48th TFW Hospital, RAF Lakenheath, UK 56th Medical Group, MacDill AFB, FL 325th Medical Group, Tyndall AFB, FL 832nd Medical Group, Luke AFB, AZ 836th Medical Group, Davis-Monthan AFB, AZ 857th Strategic Hospital, Minot AFB, ND

Defense Agencies

Defense Personnel Support Center, Philadelphia, PA Headquarters, Defense Contract Audit Agency, Alexandria, VA Headquarters, Defense Logistics Agency, Alexandria, VA

Other Government Agencies

Department of Veterans Affairs, Inspector General, Washington, DC Department of Veterans Affairs, Marketing Office, Washington, DC Department of Veterans Affairs, Chief Biomedical Engineering Division, Facilities Engineering Services, Washington, DC Department of Veterans Affairs, Engineering Training Center, North Little Rock, AR Department of Veterans Affairs, Little Rock Medical Center, Little Rock, AR Department of Veterans Affairs, Minneapolis Medical Center,

Minneapolis, MN

APPENDIX F - ACTIVITIES VISITED OR CONTACTED (cont'd)

Non-Government Activities

General Electric Medical Systems, Inc., Milwaukee, WI Imaging Equipment Services, Inc., Pittsburgh, PA Kaiser Permanente, Oakland, CA Picker International, Inc., Cleveland, OH R Squared Scan Systems, Inc., Corona, CA Radiological Service Training Institute, Solon, OH Siemans Medical Systems, Inc., Iselin, NJ

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APPENDIX G - REPORT DISTRIBUTION

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition Director of Defense Procurement Assistant Secretary of Defense (Health Affairs) Assistant Secretary of Defense (Production and Logistics) Comptroller of the Department of Defense

Department of the Army

Secretary of the Army Assistant Secretary of the Army (Financial Management) Inspector General, Department of the Army The Surgeon General, Department of the Army

Department of the Navy

Secretary of the Navy Assistant Secretary of the Navy (Financial Management) Chief, Bureau of Medicine and Surgery

Department of the Air Force

Secretary of the Air Force Assistant Secretary of the Air Force (Acquisition) Assistant Secretary of the Air Force (Financial Management and Comptroller) The Surgeon General, Department of the Air Force

Other Defense Activities

Director, Defense Contract Audit Agency Director, Defense Logistics Agency Director, Defense Logistics Studies Information Exchange Commander, Defense Personnel Support Center

Non-Defense Activities

Office of Management and Budget U.S. General Accounting Office, National Security and International Affairs Division, Technical Information Center Inspector General, Department of Veterans Affairs

APPENDIX G - REPORT DISTRIBUTION (cont'd)

Chairman and Ranking Minority Member of the following Congressional Committees and Subcommittees:

Senate Subcommittee on Defense, Committee on Appropriations Senate Committee on Armed Services Senate Committee on Governmental Affairs Senate Committee on Veterans' Affairs House Committee on Appropriations House Committee on Armed Services House Committee on Government Operations House Committee on Veterans' Affairs House Subcommittee on Legislation and National Security, Committee on Government Operations

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PART IV - MANAGEMENT COMMENTS

Assistant Secretary of Defense (Health Affairs) Department of the Army Department of the Navy Department of the Air Force Defense Logistics Agency

ABSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS

THE ASSISTANT SECRETARY OF DEFENSE WASHINGTON D.C. 20301-1200 **ACT 2 9 1992** MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE SUBJECT: Draft Report on Computed Tomography Scanner Maintenance Service Contracts (Project No. 2CD-8006) Although the operational aspects of medical maintenance are governed by acquisition and maintenance policies which come under the policy purviews of OASD(P&L), and the Military Departments, I appreciate the opportunity to offer comments on the subject draft report, and trust that these comments will be carefully considered in the preparation of your final report. High technology diagnostic medical systems, such as Computed Tomography (CT) Scanners, are absolutely crucial to the practice of quality medical care, therefore the effectiveness and efficiency of the maintenance supporting these systems are also crucial. A pillar of DoD's Coordinated Care Program is the crucial. A pillar or DOD'S COORDINATED Care Program is the delegation of decision-making flexibility to the local hospital level. The local hospital commander will be making tough business decisions regarding the optimal mix of in-house, contract, and community based clinical services. The commander must have similar flexibility to match his maintenance support to the overall coordinated care plan for the catchment area. We must have careful to balance apparent direct cost savings in a must be careful to balance apparent direct cost savings in a support arena such as CT Scanner maintenance and the indirect cost issues such as equipment availability, quality assurance, risk management, and physician retention. The report serves as an indicator that management attention needs to be focused on the issue of CT Scanner maintenance. Rowever, questions concerning the validity of the cost estimates and the need to adhere to Office of Management and Budget (ONB) and Department guidance on the Commercial Activities Program cast doubt on the findings and resulting recommendations. Specific comments on the findings and recommendations of the draft report are provided as an enclosure. The OASD(HA) point of contact for this action is MAJ Magee at (703) 614-4157. Hendez, St., M Enclosure: As stated

ABSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS (cont'd)



ABSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS (cont'd)



ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) CONMENTS (cont'd)

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| | equipment industry concerning the copyrighting and control of diagnostic software. This enhancement provides for more precise and rapid system analysis and therefore more timely and effective maintenance of the system. An alternative to making this an absolute requirement in the Statements of Work, is to use best value procedures in the contracting for maintenance services and to make the availability of diagnostic software a matter of technical merit when evaluating competing offers. |
| 8 Revised | Finding - Cost of Sole-Source Contracts Our review showed that the average cost of contracts awarded without competition for CT scanner maintenance services was 76 percent greater (\$124,196 versus \$70,478) than contracts awarded competitively (See Appendix A). For example, DoD paid an OEN \$127,700 for a 1-year maintenance contract (not including replacement tubes) for a General Electric 9800 CT scanner at Wilford Hall, Texas. For the same model at Fort Sam Houston, Texas, DoD paid \$58,800 on a competitively awarded contract to a third party service company. We calculated that DoD could save as much as \$37,466,000 over the next 6 years if all barriers to full and open competition were removed. Appendix B provides the details of the cost savings over the next 6 years. |
| | Response - Nonconcur. We believe the potential cost avoidance cited in the report is greatly overstated. The cost avoidance figures are based on an estimate that the DoD will add \$1 additional CT Scanners by 1996. The number was based on the figure used as the estimate for DoD purchases used to negotiate the recent CT Scanner acquisition contracts. This figure includes replacements as well as new scanner acquisitions, and represents the potential maximum of total scanner purchases projected (new and replacement). Based on service equipment fielding projections, it is estimated that only 11 (5 Army, 3 Navy, and 3 Air Force) new machines will be added between now and 1996. Each of the new acquisitions and any replacement or upgrade acquisitions are covered under varranty for one year and will not require service contracts until the varranty expires. The correction to the projection of the number of units requiring servicing reduces the estimated cost avoidance by approximately 37 percent. Attachment 1 shows the adjustments to the DoD IG estimates. |
| | Finding - <u>In-house Computed Tomography Scanner Maintenance</u> <u>Bervice</u> DoD hires and trains hospital equipment repair personnel to perform service on hospital equipment ranging from beds and intravenous pumps to X-ray machines. Other hospital low density, high technology medical equipment, such as CT scanners, gamma cameras and computers, ultrasound, and specialized X-ray machines, can also be maintained by hospital equipment repair personnel. However, most DoD personnel have not been trained to do the work. Many Department of Veterans Affairs (DVA) medical centers already perform CT scanner maintenance service in-house. |
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ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS (cont'd)

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| | The issues relating to the potential use of in-house DoD repair personnel concern the quality of repair service, the cost of in-house servicing, and the potential DoD and DVA maintenance sharing arrangements. Response - Monconcur. The issues relating to the potential use of in-house DoD repair personnel are not confined to the quality of repair service, the cost of in-house servicing, and the potential for DoD and DVA maintenance sharing arrangements. A very important issue overlooked in this finding concerns the Commercial Activities Program guidance as provided in OMB Circular A-76, DoD Directive 4100.15, and DoD Instruction 4100.33. This guidance must be observed when considering the conversion of an activity from commercial sources to in-house sources. DoD Instruction 4100.15, paragraph D.4., states "DoD Components shall rely on commercially available sources to provide commercial products and services except when required for national defense, when no satisfactory commercial source is available, or when in the best interest of direct patient care." | |
| 11 | Finding - <u>CT Scanner Maintenance Service Quality</u> . During the audit, it was alleged that there were maintenance service quality problems if DoD used third party service companies or in-house maintenance service for CT scanners rather than OEM maintenance service. We reviewed the maintenance service quality at several DoD hospitals and found that the allegation could not be substantiated. | |
| | In examining the maintenance service records at the Womack Army Medical Center at Fort Bragg, North Carolina, we found that the medical center used both OEM and third party contractors to service its CT scanner. We found evidence that the hospital experienced quality problems with both the OEM and third party service contractor. | |
| | We visited Keesler Medical Center at Keesler AFB, Mississippi. This medical center had the most expensive OEM CT scanner maintenance service contract within the DoD. We found that the medical center was not satisfied with the OEM CT scanner maintenance service. For several months the CT scanner had experienced imaging problems, but the OEM had not corrected these problems. | |
| | We also contacted the 22nd Strategic Hospital at March AFB, California, and discussed the CT scanner maintenance performed in-house with one of the two CT technicians. The technician praised the in-house personnel on the maintenance services. The technician's praise centered on the quick response time of the CT maintenance personnel. | |
| | Response - Nonconcur. The report lacks the objective information needed to compare the effectiveness of the three forms of maintenance service. There is no indication of a statistically | |
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ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) CONMENTS (cont'd)

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| Page No. | valid survey to measure clinical assessment of the adequacy of the maintenance services, and no indication of assessment of system downtime. Anecdotal reports from three locations do not represent a statistically valid sample from which to draw conclusions about the effectiveness of the different forms of maintenance service. |
| 8 Revised | Finding - <u>Cost of DoD Performing Ta-house CT Scanner</u> <u>Maintenance Service</u> , DoD personnel can perform CT scanner maintenance services at costs significantly lower than the costs of contracted services. The costs for DoD to competitively obtain CT scanner maintenance service by contract over the next 5 years, (1994 through 1998) would be \$63,571,000. We estimate the DoD could save \$26,477,000 if DoD personnel are hired and trained to perform CT scanner service in-house. Appendix B provides details of 6 year contract costs, and Appendix C provides the details for the annual cost savings for in-house CT scanner maintenance service. Cost savings may be greater in instances where DoD and DVA can share, in CT scanner maintenance services within a local area or in instances where comparisons are made to noncompetitive contracts. |
| | Response - Monconcur. The conversion of a contracted commercial activity (CA) to in-house performance needs to conform to the Office of Management and Budget (OMB) and DoD guidance on commercial activities. DODI 4100.33 states: "When contract costs become unreasonable or performance becomes unsatisfactory, the requirement must be resolicited. If the DoD component competes in the resolicitation, then a cost comparison of a contracted CA shall be performed" The total in-house cost estimate for personnel-related costs must be 10 percent lower and the estimated acquisition cost of additional equipment and facilities must be 25 percent lower than total contract costs to justify the performance of the CA in-house. The need for this location-by- location analysis is recognized in the last paragraph of Appendix C to the report which states that "An accurate estimate of cost can only be determined by performing an analysis for each hospital or service area where the in-house CT scanner servicing will be performed." |
| | Additionally, the cost estimates for establishing in-house capability are incomplete, and the resulting savings figures cited appear greatly overstated. The number of systems to be added between now and 1996 are estimated at 11 rather than the 81 cited in the report. This factor alone reduces the cited in-house cost savings by 21 percent or \$5.6 million. See attachment 1 for the adjustments based solely on the number of CT scanners. No factor is included to cover the additional tools and diagnostic equipment needed to support CT maintenance services. This cost may run as much as \$100,000 per system. Biomedical repair technicians are in great demand and the Services have traditionally experienced difficulty in retaining |
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ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS (cont'd)



ABSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS (cont'd)

Recommendations:

Recommendation - 1. We recommend that the Defense Personnel Support Center open solicitations for the computed tomography scanner maintenance service to all responsible bidders.

Response - Concur with comment. The existing best value contracting methodology, which considers total system life-cycle costs to include installation, training, warranty services, and maintenance services promotes full and open competition among responsible sources, and is not restrictive. The Defense Personnel Support Center should continue to consider life-cycle acquisition costs on major medical system procurements. Recommend that DPSC implement control procedures which will insure that other than OEM maintenance options are considered prior to exercising maintenance contracting options.

Recommendation - 2. We recommend that The Surgeon General, Department of the Army; Chief, Bureau of Medicine and Surgery, Department of the Navy; and the Surgeon General of the Air Force write a blanket statement of work for computed tomography scanner maintenance service contracts that does not contain restrictions to competition. This statement of work should then be the basis used for all DoD computed tomography scanner maintenance service contracting.

Response - Concur.

Recommendation - 3. We recommend that the Assistant Secretary of Defense (Health Affairs) appoint an Executive Agent to:

a. Initiate development of the capability for in-house computed tomography scanner maintenance service and phase out the use of individual hospital computed tomography scanner maintenance service contracts except where unavoidable or economical.

Response - Nonconcur. The depth of the report does not warrant a wholesale jump to in-house maintenance of CT Scanners. The report cites only one DoD location that is performing the mission in-house and cites only anecdotal evidence of the satisfaction with that support. In fact the report takes no account of clinical user satisfaction with CT scanner service support. The report also does not quantify the potential cost of down time and the potential risk management and quality assurance issues associated with the maintenance of CT Scanners and resultant diagnostic image quality. The report also does not address Commercial Activities (OMB Circular A-76) study requirements associated with determining if functions should be performed in-house or via contract. The report also assumes that in-house staff can be added in this time of downsizing of the military.

ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS (cont'd)

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| | The decisions regarding military and civilian end-strengths are normally beyond the control of the management levels which will have to manage and implement these maintenance programs. The results of the report do indicate that the density of CT Scanner's in DoD and the potential for benefits from in-house maintenance are sufficient to explore the establishment of in-house maintenance capability. The Military Departments must follow their procedures for implementing DODD 4100.15 and DODI 4100.33. Therefore, any recommendation in this regard should be directed to the Military Departments. |
| Deleted | b. Identify in-house personnel staffing and training resources to perform computed tomography scanner maintenance service at DoD hospitals and initiate appropriate funding adjustments in Military Departments' budgets. |
| | Response - Nonconcur. See response to recommendation 3.a. above. |
| | C. Coordinate with the Military Departments and the Department of Veterans Affairs to establish sharing agreements between Military Departments and between the Department of Veterans Affairs and Military Departments for in-house and contracted computed tomography scanner maintenance. |
| | Response - Concur with comment. See comments on recommendation 3.a. concerning implementation of in-house CT Scanner maintenance. Extensive sharing of services already exist both locally and nationally between the DoD and the Department of Veterans Affairs. The development of a joint blanket Statement of Work for CT Scanner maintenance and the development of shared maintenance contracts can be explored under the existing interagency agreements. |
| | Recommendation - 4. We recommend that the Assistant Secretary of Defense (Health Affairs): |
| Deleted | a. Perform a cost-benefit analysis for incorporating in-house maintenance service for other high-cost hospital diagnostic equipment such as magnetic resonance imaging, nuclear medicine, and ultrasound equipment. |
| | Response - Nonconcur. See response to recommendation 3.a. Again, as the operators of their respective components of the Military Health Services System, the Military Departments must perform installation specific cost-benefit analysis in accordance with DODD 4100.15 and DODI 4100.33 to determine if CT Scanner maintenance should be performed in-house or by contract. The site by site approach to the cost-benefit analysis is also consistent with the DoD's Coordinated Care Program. |
| 11 Revised | b. Initiate the use of in-house servicing or contract servicing based on the results of the analysis. |
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ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS (cont'd)

Response - Nonconcur. See response to recommendation 4.a. above. The initiation of in-house servicing based on the results of site specific cost-benefit analysis falls under domain of the respective Military Department. . 9

| 1993 DoD KG Extimate of Number/1 77 Tig Projected Contract Costar/1 58,542 IG Projected Contract Costar/1 55,427 IG Average Contract Cost/2 5111 KG Average Competitive Cost/3 5101 KG Average In-house Cost/4 55,427 | 1994 104 \$13,143 \$126 \$126 \$81 \$61 | 1995 131 \$17,744 | 1996 | 1997 | 1998 | 10141 |
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| ng Avenage Competitive Cosus IG Avenage In-house Cosus | 200 200 200 | \$135 *** | \$141 | \$141 \$00 | \$141 \$00 | |
| | | \$51 | \$ 51 | \$51 | \$51 | |
| Corrected estimate of Systems/5 77 | 80 | 83 | 88 | 88 | 8 9 | |
| Corrected Projected Contract Costs/6 \$8,542 Corrected Costs w/Competition/7 \$5,427 | \$10,110 \$6,510 | \$11,242 \$7,286 | \$12,162 \$7,912 | \$12,445 \$8,096 | \$12,445 \$8,096 | 366.94 7 54 3.327 |
| Corrected Cost Avoidance/8 \$3,115 | \$3,600 | \$3,956 | \$4,250 | \$4,349 | \$4 ,349 | \$23,620 |
| Corrected in-House Costa/9 | \$4,900 | \$4,251 | \$4,357 | \$4,458 | \$4,458 | \$22,425 |
| Corrected In-house Cost Avoidance/10 | \$1,610 | \$3,036 | \$3,555 | \$3,638 | \$3,638 | \$20,902 |
| Notes: 1/ Data extracted from Appendix B of DoD IG Draft F 2/ Average contract cost based on Appendix B of Dc 3/ Average competitive contract cost based on Appe 3/ Average in-house cost based on Appendix C of Dc 4/ Average in-house cost based on Appendix C of Dc 5/ Based on Service Fielding Estimates for 11 Additic 6/ Average Contract Cost as computed by DoD IG til 7/ Average Contract Cost as computed by The DoD 9/ Average In-house Costs as computed by the DoD 10/ Corrected Competitive Contract Costs less Correct | leport on CT Scari D (G Draft Report ndtx B of DoD (G D) (G Draft Report mail CTs mail CTs mail CTs mail CTs the Contract Cost the Contract Cost the Theolae Cost cted (n-house Cost | ner Maintenanci Draft Report Me of scanner r evised estimate s sts | a kumbers of scanner nur icanner number | 2002 2002 2002 | | |
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ABSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) COMMENTS (cont'd)

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(36-2b) 1st End DASG-HCL-S (SAIG-PA/3 Sep 92) LTC Armondo/aaa/(703) 756-8160 SUBJECT: Draft Report on Computed Tomography (CT) Scanner Maintenance Service Contracts (Project No. 2CD-8006) HQDA(DASG-HCZ), 5109 LEESBURG PIKE, FALLS CHURCH, VA 22041-3258 FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE (AUDITING), WASHINGTON, DC 20310-1700 1. Specific comments on the findings and recommendations for subject Draft Report are provided as enclosure 1. 2. As indicated on enclosure 1, HQDA has directed the accumulation of all existing specification for CT Scanner Maintenance Service Contracts. In conjunction with HQ, U.S. Army Health Services Command (HSC) and the U.S. Army Medical Material Agency (USAMMA), HQDA is in the process of reviewing these specifications to establish standard Army-wide specifications for CT Scanner Maintenance Contracts (enclosure 2). In addition, HODA has tasked HSC and USAMMA to jointly conduct a study of providing in-house CT Scanner Maintenance Services for a one year period to test the feasibility and utility of maintaining these high technology systems in this fashion (enclosure 3). A copy of the Action Plan we are currently operating under to complete these actions is provided as enclosure 4. 5. Point of contact for this action is LTC Armondo, DASG-HCL-S, (703) 756-8060. FOR THE SURGEON GENERAL: 4 Encls 86 1th Care ROBERT E. RICHARDS "olonel, MS unief, Medical Readiness, Magilisation & Reserve Componants Division

| | DEPARTMENT OF THE ARMY - OFFICE OF THE SURGEON GENERAL COMMENTS |
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| | ON DRAFT AUDIT REPORT |
| | COMPUTED TOHOGRAPHY SCANNER SERVICE CONTRACTS (PROJECT NO. 2 CD - 8006) |
| | FINDING. Maintenance service costs for CT scanners at DOD hospitals are excessive. This is because the hospitals use maintenance service contracts which are not as cost-effective as using in-house personnel, and, to a lessor extent, the DoD hospitale and the Defense Personnel Support Center restrict the service contracts to OEM's as alleged by the hotline referral. The result is that the DoD is currently incurring excess cost of \$3,924,000 that could be eliminated if they performed the maintenance service in-house. This excess is expected to become \$15,684,000 per year by the year 1997 and will total to \$71,050,000 from 1993 to 1998. |
| | RECOMMENDATION NO. 1. |
| Deleted | We recommend that The Surgeon General, Department of the Army; the Chief of Medicine and Surgery, Navy Department; and The Surgeon General of the Air Force: |
| | a. Determine the in-house personnel and training requirements needed to perform CT scanner maintenance service at each of their respective hospitals. |
| Deleted | b. Make appropriate funding adjustments in their budget requests and to hire any required additional personnel. |
| 11 Revised | c. Incorporate in-house CT scanner maintenance service and delete the use of CT scanner maintenance service contracts in DoD hospitals. |
| | CONDENTS ON RECONDENDATION NO. 1. Nonconcur for the following reasons: |
| | a. Implementation of in-house CT scanner maintenance service for FY 93 is extremely problematic since the identifica- tion of personnel and their subsequent training would be required prior to the start of FY 93. The identification of military per- sonnel would have to consider their background experience; time on-station and estimated rotation dates; their retention proba- bility while considering current down-sizing initiatives; their availability dates, new authorizations, etc. A similar screening process would be necessary for DA civilians, and should include an employment contract to aid retention upon completion of the train- ing. Additionally, the estimated training cost of \$8,400 per repairer would need to be FY 92 funding. |
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| 11 Revised | b. The statue of CT scanner maintenance warranties, or service contracts is not currently centrally available. Therefore, continuation of some maintenance service into FY 93 may be necessary to avoid contract cancellation penalties. c. The rationale that DoD would need 53 new personnel to printering a projected departure of 150 compares based upon inducement. |
| | practice is very simplicit. The conclusion ignores that industry or third-party service companies operate on a reasonable geograph- ical area and service a controlled range of equipment as to manu- facturer and models. On the other hand, DoD hospitals, with some exceptions such as the Washington, D.C. and San Antonio, TX areas, are typically located in widely dispersed locations and military or civilian CT maintenance specialists cannot be located to work from their home or a decentralized "office". Therefore, some in-house CT scanner maintenance specialists would be required to maintain a single system. |
| | d. The recruitment of additional civilian personnel for in-house CT scanner maintenance service is questionable since current DA policy limits civilian personnel to authorized end strength. Presently there is a DA hiring freeze in place. It does not appear that any relief from the freeze is coming in the forseeable future. |
| | e. Additional supportive reasons are addressed in the evaluation of estimated monetary benefits. |
| | PROPOSED ALTERNATIVE TO RECONDENDATION NO. 1. |
| | The Office of The Surgeon General (OTSG) agrees that sub- stantial savings may be realized from alternative methods of CT scanner maintenance service provided that quality patient care or the availability of such care is not compromised. Accordingly, a comprehensive review of CT scanner maintenance service alter- natives will be initiated. The test data accumulated will be used to determine future decisions. |
| | CONCENTS ON RECORDENDATION NO. 2. |
| 11 Revised | Concur. The OTSG will initiate a joint task force to develop mandatory specifications for CT scanner maintenance service contracts to preclude bidding restrictions. |
| | CONVENTS ON RECONMENDATION NO. 3. Not applicable. |
| | CONVENTS ON RECOMMENDATION NO. 4. |
| | Concur. The OTSG will initiate a study of current main- tenenace service methods and subsequently initiate action to ensure quality services at the least total cost. |
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| | COMMENTS ON THE SUMMARY OF POTESTIAL MONETARY AND OTHER BENEFITS. |
| | Nonconcur for the following reasons: |
| 13 Revised | a. In-house costs do not reflect TDY costs since the majority of CT scanners in DoD bospitals are a single system. |
| | b. In-house costs reflecting the cost of patient referrals during CT scanner down-time are not quantified but are mentioned in the audit. CT scanner down-time caused by TDY delays, per- sonnel leave or sickness, etc., will result in patient referrals above that experienced by manufacturer or third-party contractors. |
| | c. In-house costs for training during the remainder of 1992 in order to implement in-house maintenance service are not listed. In general, training costs are reflected too late. |
| | d. No factor for training replacement maintenance service personnel is considered, nor is refresher training considered when CT scanners are upgraded (software or hardware). Our estimate of retraining is a minimum of 25 percent based upon current losses of both civilian and military medical equipment repairers and equipment upgrades. |
| | e. CT scanner maintenance service contracts and in-house maintenance service cost incorrectly assume that the S1 CT scanners identified on a Defense Personnel Support Center (DPSC) Request For Proposal (RFP DLA 120-90R-0733 will be purchased and will not replace existing obsolete or worn-out systems. In fact, some units will be replaced. |
| | f. In-house costs for repair parts do not recognize that repair parts costs vary with CT scanner use and age. Additionally, the in-house costs do not consider the cost of replacement x-ray tubes. Replacement x-ray tubes are usually deeply discounted when the manufacturer performs the maintenance services and typi- cally amount to 38 percent of contractural maintenance services; |
| | g. The in-house costs do not consider one-time contractual maintenance service costs for unique situations such as simul- taneous failures in a region, extended sickness of maintenance personnel, etc. |
| | h. In-house costs do not reflect the additional high- priority requirement for repair parts and the impact upon the hospital or installation procurement offices. |
| | i. The cost of service manuals and diagnostic software to troubleshoot CT scanners is also not considered. |
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01 022511.32 ZSEP 92 RR UUUU ADMIN DA WASHINGTON DC//DASG-HCL// CDR USAHSC FT SAN HOUSTON TX//HSLO// CDR7THMEDCOM HEIDELBERG GE//AEMLO// CDRIATHHEDCON SEOUL KOR//EAHC-L// CDRUSAMRDC FT DETRICK MD//SGRD-RML// INFO CDRUSAMMA FT DETRICK MD //SGMMA-ZA// UNCLAS SUBJECT: COMPUTERIZED TOHOGRAPHY (CT) SYSTEM MAINTENANCE STUDY 1. DEPARTHENT OF DEFENSE (DOD) INSPECTOR GENERAL (IG) DRAFT AUDIT REPORT ON COMPUTED TOHOGRAPHY SCANNER MAINTENANCE SERVICE CONTRACTS. PROJECT NO. 200-8006. 25 AUG 92. 2. THE DODIG RECENTLY AUDITED DOD'S ALMOST TOTAL USE OF SERVICE CONTRACTS TO PROVIDE MAINTENANCE FOR CT SYSTEMS. THEY CONCLUDED THAT DOD AWARDED CT SCANNER MAINTENANCE SERVICE CONTRACTS WITHOUT FULL AND OPEN COMPETITION DUE TO BID RESTRICTIONS IN THE PROCUREMENT PROCESS. THEY ALSO SUGGESTED THAT OVER OLD MILLION IN POTENTIAL BENEFITS COULD BE REAPED BY DOD IF THEIR RECOMMENDATIONS WERE INPLEMENTED. 3. THE ARNY HEDICAL DEPARTMENT AGREED TO INITIATE A TASK FORCE TO DEVELOP STANDARD MAINTENANCE SERVICE CONTRACT SPECIFICATIONS. THE LTC ARMONDO, DASG-HCL-S, 756-8067 LIVERNORE, DASG-HCZ, 756-8210 UNCLASSIFIED ENCLZ

50 50 RR υυυυ ACTING SURGEON GENERAL ALSO APPROVED CONDUCTING A STUDY OF USING IN-HOUSE PERSONNEL TO PERFORM CT SYSTEM MAINTENANCE 23 AUG 92. 4. ACTION ADDRESSEES WILL COLLECT A COPY OF EACH CT SCANNER SYSTEM MAINTENANCE SERVICE CONTRACT FOR THEIR SUBORDINATE ACTIVITIES. THESE CONTRACTS MUST BE FORWARDED TO THE FOLLOWING TASK FORCE POCS TO ARRIVE NOT LATER THAN & OCT 92. A. TASK FORCE POC FOR HSC CT SYSTEM SERVICE CONTRACTS--CW3 PLACE, HSLO-PH. B. TASK FORCE POC FOR 7TH AND JETH HEDCON CT SYSTEM SERVICE CONTRACTS -- CW3 BREWER, SGMMA-M. 5. TASK FORCE POCS WILL ANALYZE ALL AMEDD CT SYSTEM SERVICE CONTRACT SPECIFICATIONS BY 30 OCT 72 AND PREPARE A BRAFT STANDARD SPECIFICATIONS NLT 33 DEC 92. L. HE HSC, USANHA, AND THIS OFFICE WILL JOINTLY TEST THE PROVISION OF IN-HOUSE CT SCANNER MAINTENANCE SERVICES AND EVALUATE THE FEASIBILITY OF USE THROUGHOUT THE ANEDD. 7. POINTS OF CONTACT FOR THIS ACTION ARE LTC ARMONDO, BASG-HCL, BSN 289-8060 OR CONHERCIAL (703) 756-8060% CW3 PLACE, HSLO-PH, DSN 471-8405 OR CONHERCIAL (512) 221-84054 AND MR. KASTEN/ CW3 BREWER, SGNHA-H, DSN 343-7443 OR COMMERCIAL (303) 639-7443. LTC ARMONDO, DASG-HCL-S, 756-8067 COL LIVERHORE, DASG-HCZ, 756-8210 UNCLASSIFIED

DEPARTMENT OF THE ARMY OFFICE OF THE SURGEON GENERAL STOPLEESOUNG PIKE FALLS CHURCH, VA 22041-3254 -8: 8 Sep 92 2 7 AUG 1992 DASG-HCL (750) NEMORANDUM FOR COMMANDER, U.S. ARMY HEALTH SERVICES COMMAND, ATTN: DCSLOG, FORT SAM HOUSTON, TX 78234-6000 SUBJECT: Computerized Tomography (CT) System Maintenance Study 1. Maintenance support for our CT systems and those of the other Services has been almost totally provided through the use of service contracts since their introduction into the inventory. There are a number of very good reasons that this has occurred. In spite of those reasons, the Department of Defense (DOD) Inspector General (IG) recently questioned both the concept and the method of providing maintenance service contracts for CT systems. The DODIG recommended hiring and training DOD personnel to provide this service in-house. They claimed this action would create substantial monetary savings to DOD (over \$71 million in savings between now and 1998). The Army Medical Department (AMEDD) nonconcurred with the DODIG recommendation to use in-house maintenance personnel to maintain our CT systems. We agreed, however, to initiate a task force to develop mandatory maintenance specifications, and te initiate a study of current maintenance options. The Acting Surgeon General approved conducting this study and developing service contract specifications on 21 Aug 92 (enclosure 1). 4. You are tasked to jointly develop the detailed study 4. You are tasked to jointly develop the detailed study protocol, select the study location, and conduct the CT maintenance study with this office and the U.S. Army Medical Materiel Agency (USANMA). You are also tasked to provide the data and assistance necessary to review existing CT maintenance service contracts. Provide the name and phone number of your Project Officer for these efforts to the points of contact MIT & Sen 92. Every effort should be made to execute the NLT & Sep 92. Every effort should be made to execute the proposed Action Plan during FY 93. Proposed timelines for this study are provided as enclosure 2. ENCL3

UASG-HCL SUBJECT: Computerized Tomography (CT) System Maintenance Study 5. Points of contact for this action are LTC Armondo, DASG-HCL, DSN 289-8060 or commercial (703) 756-8060, and Mr. Kasten, SGMMA-M, DSN 343-7441 or commercial (301) 619-7441. FOR THE SURGEON GENERAL: 2 Encls E. LIVERMORE PHILIP Colonel, MS Acting Director, Health Care Operations 85 CF: COMMANDER, U.S. ARMY MEDICAL MATERIEL AGENCY, FREDERICK, MD 21702-5001 2
DEPARTMENT OF THE ARMY - OFFICE OF THE SURGEON GENERAL COMMENTS (cont'd)

Final Report

| 12 | CT SCANNER SYSTEM MAINTENANC | E ACTION PLAN |
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| 12 | EVENT | COMPLETION DATE |
| | 1. Obtain TSG approval. | 21 August 1992 |
| | 2. Notify DASG-PTZ and SGPS-RMZ of approved alternative. | 21 September 1992 |
| | 3. Notify HQ, HSC, 7th, and 18th MEDCOMS of analysis/test. | 23 September 1992 |
| | 4. Establish analysis/test partnership with HQ HSC. | 23 September 1992 |
| | a. Initiate collection of existing CT Scanner System Maintenance Service Contracts. | 23 September 1992 |
| | b. Initiate analysis of existing CT Scanner System Maintenance Service Contracts. | S October 1992 |
| | c. Complete Draft Standard CT Scanner S Maintenance Service Contract. | ystem 31December1992 |
| | d. Establish partnership with test hospitak | . 30 October 1992 |
| | (1) Identify personnel to be trained. | 6 November 1992 |
| | (2) Identify data elements for collection and reporting throughout the study. | 30 October 1992 |
| | (3) Complete required training. | 31 December 1992 |
| | (4) Modify existing CT Scanner Syste Maintenance Service Contract to provide backup | em 31 December 1992 service. |
| | 5. Complete cost benefit analysis of existing CT Scanner System Maintenance Service contracts. | 30 October 1992 |
| | 6. Initiate study at selected sites (BAMC & DDE | AMC). 1 January 1993 |
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| 13 | CT SCANNER SYSTEM MAINTEN | ANCE ACTION PLAN |
| | EVENT | COMPLETION DATE |
| | 7. Review Study data at 6 months. | 1 July 1993 |
| | 8. Review Study data at 9 months. | 1 October 1993 |
| | 9. Review Study data at 12 months. | 1 January 1994 |
| | 10. Conclude Study at 18 months and analyz | e data. 1 July 1994 |
| | 11. Prepare and staff analysis of study data. | 1 August 1994 |
| | 12. Implement approved recommendations fr | rom study. 1 October 1994 |
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DEPARTMENT OF THE ARMY - OFFICE OF THE SURGEON GENERAL COMMENTS (cont'd)

DEPARTMENT OF THE NAVY COMMENTS

THE ASSISTANT SECRETARY OF THE NAVY (Research, Development and Acquisition) WASHINGTON, D C. 20350-1000 DCT 22 1992 MEMORANDUM FOR THE DEPARTMENT OF DEFENSE INSPECTOR GENERAL Subj: DRAFT REPORT ON THE AUDIT OF COMPUTED TOMOGRAPHY (CT) SCANNER MAINTENANCE SERVICE CONTRACTS (PROJECT NO. 2CD-8006) -INFORMATION MEMORANDUM In response to the subject draft audit report the Department of the Navy agrees that full and open competition should be used in contracting for maintenance services. We also agree that the potential exists to establish sharing agreements in geographical areas to achieve economies of scale. We do not concur, based on the data provided, that bringing maintenance services in-house would achieve substantial savings. We will review this issue further. further. lar Gerald A. Cann Copy to: NAVINSGEN NAVCOMPT (NCB-53)

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DEPARTMENT OF THE AIR FORCE COMMENTS

DEPARTMENT OF THE AIR FORCE AR FORCE MEDICAL LOGISTICS OFFICE FREDERICK, MD 21702-5008 23 October 1992 MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING OFFICE OF THE INSPECTOR GENERAL DEPARTMENT OF DEFENSE Draft Report on Computed Tomography Scanner Maintenance Service Contracts SUBJECT: (Project No. 2CD-8006) This memorandum is in suply to a request for the Secretary of the Air Force (Financial Management and Comptroller) to provide comments on the subject report. The following comments on the audit Recommendations for Corrective Action are provided for consideration in finalizing the report. The remainder of this memorandum contains specific supporting data, comments, and corrected cost savings. a. Reference Recommendation 1. Nonconcur with comment. (1) This recommendation actually states that contracting for CT maintenance contracts should be separated from contracting for the CT system itself. We do not concur. We specifically requested maintenance options with the purchase of each CT scanner because this is the only contracting method known that can yield a true life cycle cost evaluation of the system. We believe this is the appropriate acquisition strategy to use when it is anticipated that contract maintenance will be required to support an equipment system. This position is supported by reliable civilian and USAF sources. (2) The Emergency Care Research Institute (ECRI) published a special edition of Health Technology, Volume 3, Number 4, Winter 1989, titled "Special Report on Managing Service Contracts." In an article titled "Types of Service-Their Advantages and Disadvantages," the authors maintain the "time to set the stage for service options for a new device or system is as early as possible in the acquisition process." They justify this conclusion based on the following points: (a) With comprehensive service requirements in the Request for Proposal (RFP), "...detailed service related information can be obtained from all manufacturers and considered as an integral part of the acquisition process." (b) They point out that "This is the only time the hospital has any real leverage to insist on receiving essential service elements, such as the right to use diagnostic software*

(c) They even go so far as to say that "...detailed service requirements should be incorporated into the eventual purchase order, whether or not a tentative decision has been made about using the manufacturer for post warranty service."

(d) Finally, "By making the manufacturer's service support requirements part of the acquisition process, the hospitals service options in future years will not be limited."

(3) The Fall 1991, Air Force Journal of Logistics: Desert Shield/Storm Logistics Lessons Learned contains an article titled Supporting Commercial Systems by Robert G. Olear, Logistics Management Specialist, Air Force Systems Command. Mr. Olear was a member of a special Commercial Off-the-Shelf (COTS) Supportability Working Group tasked with the development of policies and procedures to improve support of commercial equipment and systems. Among the final recommendations were the following:

(a) Indicate contractor support is preferred unless mission needs are not met.

(b) Apply vendor support concepts whether support is organic or contract.

(c) Develop support requirements, life-time support strategy, and contract language for commercial items up front.

b. Reference Recommendation 2. Concur with the recommendation to develop a standard statement of work for computed tomography scanner maintenance service contracts for DoD. However, the following comments are provided regarding what constitutes restrictive bidding provisions.

(1) The section on Factory Training Restrictions states that a requirement for factory training on a specific scanner make and model is restrictive and eliminates responsible bidders. While the factory training requirement may be beyond the minimum needs, technical training on a particular scanner make and model is not beyond the minimum needs. It is essential for proper preventive and unscheduled maintenance for the technician to be trained on the system being repaired. For example, a technician trained to repair GE scanners is not necessarily gualified to repair a Siemans scanner.

(2) The section on Software Restrictions states, "licensing requirements for diagnostic software were not essential to performing diagnostic functions." Diagnostic software is essential to the efficient performance of service on most CT scanners. Without specific diagnostic software, a field service engineer is required to use a brute force process of elimination to identify a faulty part. This not only requires excessive time, but often results in the purchase of needless parts for brute force substitution.

| Final Report | |
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| 1 and 12 Revised | c. Reference Recommendation 3. Concur with the intent of the recommendation but not the wording. Comments are provided below. |
| | (1) Parts a, b, and c of this secommendation identify the initial steps toward implementing an in-service capability. However, the most important step, conducting a detailed cost analysis at each location to determine the cost effectiveness and feasibility, has been eliminated. The draft report recognizes the importance of this task, but it is buried in the last paragraph of Appendix C. In all fairness, the sentence that states "An accurate estimate of cost can only be determined by performing an analysis for each hospital or service area where in-house CT scanner servicing will be performed." should also be included in the executive summary, conclusions and recommendation sections. |
| | (2) The USAF is ready to initiate these studies and implement test programs for CT scanner maintenance at selected sites. However, the funding and staffing resources will be required to implement even test programs. Current manpower suthorizations is one of the primary reasons for using contract maintenance support. |
| | The report contains several broad generalizations, inaccurate estimates and computations, incomplete data, and incorrect assumptions. |
| 5 Revised | a. The Audit Results section states that the data contained in this report results in a "Cost savings of 54 percent" if contracts are awarded with full and open competition. It also states, "An additional 71 percent can be saved by performing CT scanner maintenance service in-house." We do not concur with the calculations supporting these statements. |
| | (1) The following is a correction to the method of calculating savings and not an endorsement of the supporting data. The data in Appendix B shows projected current contract costs of \$106,464,000 and a cost of \$68,998,000 if service contracts are awarded with full and open competition. This is a dollar savings of \$37,466,000. The reported savings of \$4% is apparently calculated as \$37,466,000/\$68,998,000=54.3%. This is not a cost savings, but a cost increase from contracts awarded with competition to the current projected contract costs. The percent savings should be calculated as \$37,466,000/\$106,464,000=35.2%. |
| | (2) For comparison of in-house maintenance to contract maintenance, Appendix B reports the contract cost as \$63,571,000 and in-house costs as \$37,094,000 resulting in a dollar savings of \$26,477,000. An "additional cost savings" of 71% is then calculated as \$26,477,000/\$37,094,000. The additional cost savings should be calculated as \$26,477,000/\$63,571,000=41.6%. This is the cost savings of in-house maintenance over full and open competition awarded contract maintenance. The actual percent of additional savings over the existing contract maintenance could be calculated as \$26,477,000/\$97,922,000=27%. Then the final statement should be corrected to say that using full and open competition results in a savings of 35.2% and an additional 27% could be saved using in-house maintenance. |
| | b. The Maintenance Service Records section states that records were reviewed at four DoD hospitals to compare the quality of CT maintenance service provided by OEMs and other |
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| | maintenance service companies. Four hospitals do not provide an adequate sample size for extrapolation of this data to all other locations. The records on the one USAF unit maintained in-service is certainly not representative for extrapolation purposes. It is a relatively new unit with a low utilization rate. |
| 9 evised | c. The last sentence of the Conclusion section, page 13, states, "We believe the DoD should emulate the DVA example and become efficient in the area of medical equipment maintenance." This statement is far too generic and implies the DVA is more efficient at medical equipment maintenance in general. This audit examines only a portion of DoD CT maintenance services and the supporting data does not show that the DVA is more efficient. |
| | d. In Part II, Discussion of Details, the report makes selecence to the FAR 17.207(c)(3) and $d(1)$ "Exercise of Options" and states that this requires the contracting officer to determine if the exercise is the most advantageous method of fulfilling the government's need, and if a new solicitation fails to produce a better price. This implies that the contracting officer has illegally exercised maintenance options. What is not reported here is that FAR 17.207(d)(2) and (d)(3) gives the contracting officer two additional options instead of a new solicitation. Also, sections (d)(1), (d)(2), and (d)(3) contain the caveat "or that the option is the most advantageous offer." This draft audit report does not show that the exercise of these options is not the most advantageous offer. Many factors in addition to cost must be considered. |
| | e. The section titled Reasons for Sole-Source states that 27 of the 36 contracts were awarded without full and open competition. Then the report says that 19 of 27 were not subject to FAR Subpart 6.1. This is a direct contradiction. |
| | f. The subsection titled CT Scanner Maintenance Service Options quotes FAR Subpart 6.1 then states, "In our review of four contracts with 19 contract options for maintenance service, which DPSC awarded, we determined that this FAR requirement was not met." It goes on to say that the provisions of 6.1 were not met at the time of award or at a later time when the maintenance options were exercised. The exercise of contract options, however, is not subject to the FAR Subpart 6.1. It also says that DPSC exercised the contract maintenance options without soliciting all responsible sources. This is not required under the FAR 17.207(d)(2), nor does the audit show that DPSC exercised the options improperly. The discussion implies the FAR requires that all responsible sources must be solicited in order to exercise an option. This is simply not the case. |
| | We cannot concur with the potential savings and benefits presented in several sections of the report. Our rationale and corrected data for Air Force activities is outlined as follows: |
| | a. The paragraph on Cost of Sole-Source Contracts and Appendix A compares the cost of contracts awarded sole-source versus competitive bidding, and uses this as the basis for dollar value savings. In order to compare the contracts and draw valid conclusions, more data is needed on the provisions within each contract. It is obvious that service contracts for CT scanners of various manufacturers have all been grouped together with replacement tubes as the only distinguishing characteristic. There are many other valid reasons for contract prices |
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DEPARTMENT OF THE AIR FORCE COMMENTS

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| | to vary. Factors such as model and age of the unit, manufacturer, options included on the equipment, service response times, hours of coverage (8 hours versus 16 hours per day or normal business hours versus 7 days a week), guaranteed up-time, and liquidated damages clauses greatly affect the contract cost. Without a comparison of the provisions of each contract, the conclusions draws on the amount of savings is statistically invalid. |
| | b. The report section, Part I - Introduction, contains several errors and false or missing assumptions. |
| 1 Revised | (1) The Background section states that "DoD plans to place an additional \$1 scanners in service over the next 3 years." The section under Scope, Documents Reviewed, states that Request for Proposal (RFP) DLA120-91R-1522 is for procurement of \$1 scanners over the next three years. The RFP has resulted in award of three contracts. Contract number DLA120-92-D-8314 was awarded for 15 basic performance level scanners over the next three years. Contract number DLA120-92-D-8315 was awarded for 30 standard performance level scanners over the next three years. Contract number DLA120-92-D-8317 was awarded for 15 high performance level scanners. This results in a total of 60, not \$1. The scope section also states that the procurement was reviewed to determine whether the scanners were new systems or replacements of existing CT scanners. Many of these systems will be replacements, yet all the calculations of savings we \$1 scanners in addition to the 78 already in place. The current and projected distribution of CT scanners in the AF is shown in the table at attachment 1 of this memorandum. Even though the Air Force will purchase three scanners are included is a net gain of two CT systems. There may be additional purchases of replacement systems during these three years, but the set gain/loss will be zero and maintenance service cost for the following year would be zero. The first table at attachment 2 of this memorandum is a computation of contract Servicing Costs for Air Force CT systems only. We recommend similar data be obtained from the Army and Navy to correct the Table at Appendix B to reflect accurate numbers of systems. |
| | (2) The Scope section states that of 78 scanners in DoD hospitals, 73 were under contract maintenance. The seport reviewed the costs applicable to fiscal year 1992 for 36 of the 73 CT scanners. The criteria used to select the subset of 36 from the 73 for review was not provided. Without a true random sample, all calculations and extrapolation to the full complement of 73 scanners are invalid. |
| | c. Reference Appendix C - Computation of In-House Costs. A cost comparison of in-house versus contract maintenance is not the only criteria on which these two options must be judged. Some of the most important reasons for purchase of contract maintenance are logistical support, minimization of parts acquisition time and scanner down-time, and access to a vast knowledge base of diagnostic experience and expertise. In-house maintenance virtually assures an inexperienced staff because of high turn-over rates. There are several assumptions made in this section that we believe are inaccurate and impact potential cost savings. |
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| 21 Revised | (i) Reference Labor Costs. The projection of labor costs based on 439 hours per year per scanner at an hourly rate of \$22.93 per hour or \$10,100 per year is flawed for several reasons. First, this estimate assumes that one technician can maintain more than one scanner. While this is possible in some areas of the country where scanners are located in close geographic proximity, many scanners are too isolated to realistically share maintenance with other facilities. Also, one technician can not be available 24 hours a day, 365 days a year. Our estimates of labor costs are calculated as follows: |
| 21 Revised | (a) Appendix D provided data on 20 geographic regions that have potential for shared CT maintenance between the services and the DVA. Using this data and assuming that one technician can maintain three CT systems if they are in close geographic proximity, we determined that it will require 52 technicians to support the 124 CT systems shown in these 20 regions. Of these 124 scanners, 46 are current DoD scanners, therefore, the other 32 are not located in one of these geographic regions. These 32 scanners would require a dedicated technician thus bringing the grand total to 84 technicians. This means that 84 technicians are required to support 156 scanners. This translates to .54 full time equivalents per scanner. Note that this estimate is skewed to the low side since we have no estimate of the number of isolated scanners the DVA has in use. |
| 21 Revised | (b) The estimate of total labor costs for the years between 1994 through 1998 can not be calculated based on the number of hours per year for repair of the scanner, but must be calculated on the basis of the number of people paid. Therefore, the total labor cost for DoD for the years 1994 to 1998 is \$18.3 million (\$47,700*.54*No. Scanners) plus \$7.1 million for fringes totaling \$25.4 million. |
| 21 Revised | (2) Reference Parts Costs. The estimate of parts costs is based on only three locations that have in-house maintenance. The parts costs for the 22nd Medical Group, March AFB CA are extremely low for a couple of reasons. The 22nd Medical Group is a small hospital (80 bed) with limited workload and the scanner is brand new. Larger hospitals have heavier workloads requiring tabes to be replaced almost yearly. The tube can be a \$30,000 part. The audit cites the DVA medical center in Little Rock AR as having an abnormally high parts cost of \$21,960. We do not think this is a high parts cost, especially if the DVA in Little Rock is a large hospital. Take Keesler AFB for example, where the detector array costing \$400,000 was recently replaced. Although we do not have a figure for average parts costs across all sizes of installations and all brands of scanners, an estimate should not be derived from data at only three locations. A more comprehensive study is necessary to obtain an accurate estimate of parts costs. |
| 21 Revised | (3) Reference <u>Training Costs</u> . Historical experience shows that we must train 30% of the technicians each year to maintain a staff of trained maintenance technicians. Training one technician per scanner is inadequate to cover the entire period. A more realistic training cost based on this history is included in the table shown below. |
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| Page No. | (4) The follow labor, fringes, and tra | ving table is a ining. The s | a sework of | f the table a CT systems | t Appendix is the sam | C reflection e as the dra | g corrections to R. |
|----------------|--|---|--|---|--|--|---|
| | | COMPU | TATION (| of IN-HO \$000) | ISE COST | 8 | |
| | | 1994 | 1995 | 1996 | 1997 | 1998 | Total |
| 21 | CT Scauners | 104 | 131 | 158 | 158 | 158 | ······································ |
| evised | Labor | \$2,679 | \$3,374 | \$4,070 | \$4,070 | \$4,070 | \$18,263 |
| | Fringes | \$1,037 | \$1,306 | \$1,575 | \$1,575 | \$1,575 | \$7,068 |
| | Parts | \$3,584 | \$4,514 | \$5,445 | \$5,445 | \$5,445 | \$24,433 |
| | Training | \$719 | \$402 | \$458 | \$327 | \$327 | \$2,235 |
| | Total | \$8,019 | \$9,596 | \$11,548 | \$11,417 | \$11,417 | \$51,999 |
| | to the low side. (5) The second maintenance for the in-house maintenance experience and marks that calculations in | nd table at A years 1994 th ce undergo let surveys of the audit or | a do not ac Appendix E hrough 199 a detailed 'available : in this res | soount for is of the aux 8. Recomm cost comp rervice in fi ponse, whit | in report al mend that (parison us) as geograph ch are bas | A systems, hows the or each locatio ing actual lic area. We ed on narr | they are skewed outs for in-hous a considered for data from pas /e do not believ ow assumptions w he accurated |
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| 8 Corrected | to the low side. (5) The second maintenance for the in-house maintenance experience and marks that calculations in adequately represent extrapolated to represent extrapolated to represent extrapolated to represent our revised computer recommend similar Appendix B of the an Air Force Correct Department of Vetto memorandum. The following correction. a. The section to states, "in CT as typographical error. | nd table at A years 1994 to ce undergo et surveys of the audit or t the costs f sent the sam ution of In-b data be obt udit report to ctions to App cerans Affair typographical itled, Cost of canner maint | a do not ac Appendix E brough 199 a detailed 'available : in this res ouse Service ained from reflect acc bendix D - is Medical I, gramma DoD Perf chance ser | soount for is s of the auc 8. Recomm cost comp nervice in fi ponse, whi D CT main cond table a cing Costs in the Army urate numb DoD Comp Centers a tical, and forming In-I | it report a mend that o parison us a geograph ch are bas demance, it it attachmen for Air Fo and Navy ers of syste uted Tomo; re include mathematik nouse CT S a a local a | A systems, hows the or sach locatio ing actual sic area. We do a sarm for can the st 2 of this roce CT system y and com ma. graphy Scau d as attack as attack as attack canner Mai urea 9" | they are skewed outs for id-bound a considered for data from pass /e do not believe ow assumptions by be accurately memorandum i stems only. We ect the Table a ners and Nearb hment 3 to this re identified for intenance Service This must be |

Final Report Page No. 8 b. The sentence "Patient services and the number of patients a CT scanner can handle will improve by increasing CT scanner maintenance service response time." is incorrect. Corrected Decreasing response time will improve patient service. c. The section on Potential Benefits of the Audit states, "DoD could achieve \$37,466,000 ίi of potential monetary benefits by improving competition in the acquisition of CT scanners* Corrected Competition in the purchase of CT scanners is not in question. We assume this means "competition in the acquisition of CT scanner maintenance services." d. Reference Appendix A. (1) In the table that calculates average cost per scanner with and without tubes, page 16 24, the average cost per scanner awarded competitively is shown as \$70,478. This number Corrected should be \$70,448. (2) On page 25, the estimated total DoD contract cost for 1992 is calculated. The table uses 77 scanners as the number for calculation of total. As specified in the Scope section 17 of Part I - Introduction, of the 78 scanners currently in use in DoD, one is maintained in-house Corrected and four are new and still under manufacturers warranty. Therefore, 73 scatners should be used in all calculations of the total cost. Also on this page, the multiplication of 58 X \$124,196 = \$7,303,368 should be \$7,203,368. We appreciate the opportunity to comment on the Draft Audit Report. Please address any questions concerning our comments to Lt Col Leslie Wood or Mr. David Baker at DSN 343-2091 or commercial (301)-619-2091. JOHN E. HOLES, Colord, USAF. MSC Chief, Air Force Medical Logistics Office 3 Atch 1. Current and projected AF **CT Scanners** 2. Computation of contract servicing costs 3. Correction to Appendix D

DEPARTMENT OF THE AIR FORCE COMMENTS (cont'd)

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DEPARTMENT OF THE AIR FORCE COMMENTS

| Installed | 1992 | 1993 | 1994 | 1995 |
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| 1989 | , , , , , , , , , , , , , , , , , , , | | | |
| 1989 | | | | |
| 1988 | | | Replace | |
| | | New | | |
| 1987 | | | | |
| 1989 | | | | |
| 1987 | | | | |
| 19913 | | | | |
| 1986 | Base closed | CT removed | in 1992 | • |
| 1991 | | | | |
| 1986 | | | | |
| 1984 | | | | |
| | New ⁴ | | | <u> </u> |
| 1984 | | Replace | | |
| 1988 | | | | |
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| 1990 | | | <u> </u> | ļ |
| 1986 | | L | L | I |
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| 19917 | I | Į | ļ | |
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| 1990 | | Į | Į | |
| 1989 | <u> </u> | | | |
| 1988 | ļ | Closing 9/93 | | |
| I 1989 | | <u> </u> | <u> </u> | |
| | 1 | | | |
| 1987 | (Transferred | to Navy | in 1991) | <u> </u> |
| | Installed 1990 1990 1989 1989 1987 1987 1987 1987 1987 1987 1987 1987 1987 1987 1987 1987 1987 1987 1987 1988 1987 1986 1984 1988 1987 1988 1987 1988 1989 1988 1980 1989 1988 1980 | Installed 1992 1990 1990 New ⁴ 1989 1989 1988 | Installed 1992 1993 1990 | Installed 1992 1993 1994 1990 |

CURRENT AND PROJECTED U.S. AIR FORCE

1 Under warranty until 25 Mar 1993

2 Maintained In-bount

3 Under warranty until 23 Aug 1992 (maintenance contract for 1 quarter in 92)

• Under warranty until 15 May 1993

8 Scheduled for installation in early 1993

6 Under warranty unil 12 Feb 1993

1 Under wattanty until 23 Nov 1992 (maintenance contract for 1 month in 90)

. Under warranty until 29 Apr 1993

| | 1993 | 1994 | <u>8</u> | 8 | | 86. | |
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| naer Maintenanco Contracta | 4)6Z | 8 | R | ы | 2 | u | |
| vinen for Contract Competiti | r. | | | | | | |
| | 2.584 | \$2.\$80 | \$2,990 | 22990 | 22,990 | 06673 | A2A,718 |
| At Competition | 81.644 | \$1.832 | \$1,902 | \$1,902 | \$1,902 | \$1,902 | \$11,064 |
| | 965 | \$1.048 | \$1,068 | \$1,088 | \$1,08\$ | \$1,068 | 946,34 |
| rith Competition | | \$1,832 \$2,005 | 51,902 529,12 | \$1,902 | \$1,902 \$1,951 | \$1,902 \$1,951 | 59,440 518,62 |
| re come seridance | ł | 5173 | -\$53 | 935 5 | \$- \$- | 6 5 - | 5155- |

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| | Corrections to Appendix D |
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| | DoD Computed Tomography Scanners and Nearby Department of Veterans Affairs Modical Centers. |
| | a. Reference 1. <u>Southern California</u> . Your list of potential DoD hospitals with CT scanners includes George AFB which is scheduled for closure in December 1992. A CT scanner will not be located there. Edwards AFB and Vandenberg AFB are 25 and 20 bed facilities, respectively, and are not candidates for CT scanners. |
| | b. Reference 2. <u>Florida</u> . Your list of existing CT scanners includes Homestead AFB which was destroyed by Hurricane Andrew and the CT scanner was removed. The list of potential sites includes Eglin AFB and Tyndall AFB which already have CT scanners which were installed in 1987 and 1991, respectively. Patrick AFB is a 19 bed clinic and not a candidate for a scanner. |
| | c. Reference 4. <u>Texas</u> . The list of existing scanners should be updated to include a third scanner at Wilford Hall USAF Medical Center, Lackland AFB. Potential scanners includes Sheppard AFB which had a scanner installed in 1989. Recee AFB and Dyess AFB are 9 and 20 bed facilities, respectively, and are not candidates for a scanners. |
| , | d. Reference 5. <u>Northern California</u> . You have listed David Grant USAF Medical Center, Travis AFB as having two scanners, while they have only one. A replacement for this scanner is tentatively scheduled for 1994. Beale AFB is a 15 bed facility and not a candidate for a scanner. |
| } | e. Reference 8. <u>Georgia</u> . Robins AFB is a 35 bed facility and not a candidate for a CT scanner. |
| | f. Reference 9. <u>Illinics/Missouri</u> . Channet AFB is scheduled for closure in September 1993 and, therefore, is not a candidate for a scanner. |
| | g. Reference 10. Washington. Fairchild AFB uses contract CT services and is a 35 bed facility and, therefore, is not a candidate for a CT scanner. |
| | h. Reference 12. <u>Colorado</u> . Under potential DoD hospitals with CT scanners you list Colorado Springs. If this refers to the USAF Academy, they already have a CT scanner which was installed in 1987. |
|) | i. Reference 14. <u>Oklahoma</u> . The USAF Hospital Tinker, Tinker AFB is listed as an existing site, but they do not have a scanner. They requested a scanner at one time but being only a 35 bod facility they did not qualify based on expected workload. Altus AFB is a 15 bed facility and, therefore, not a candidate for a scanner. |
|) | j. Reference 16. <u>Mississippi</u> . Keesler AFB is listed as having one CT scanner. They will install a second scanner in early 1993 which will be under warranty until 1994. The list of existing scanners should be updated to reflect this addition. |
| | Atch 3 |

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DEFENSE LOGISTICS AGENCY COMMENTS

DEFENSE LOGISTICS AGENCY HEADQUARTERS CAMERON STATION ALEXANDRIA, VIRGINIA 22304-\$100 1 6 10 / 1992 ALTER TO DEA-CI MEMORANDUM FOR DEPUTY ASSISTANT INSPECTOR GENERAL FOR AUDITING. Department of defense SUBJECT: DoD IG Draft Report on " Computed Tomography Scanner Maintenance Service Contracts" (Project No. 2CD-8006) This is in response to the subject report. Major General Lawrence P. Farrell, USAF, Deputy Director, Defense Logistics Agency, has approved these positions. a. R. bendent JACQUELINE G. BRYANT 2 Encl N Chief, Internal Review Division Office of Comptroller w/2 Attachments cc: DLA-PPP DLA-6 DLA-SE DLA-LX

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FORMAT 1 OF 2
                                   DATE OF POSITION:
TYPE OF REPORT: AUDIT
                                                         0 6 NOV 1992
PURPOSE OF INPUT: INITIAL POSITION
AUDIT TITLE AND #: Computed Tomography Scanner Maintenance
                     Service Contracts (Project-No. 2CD-8006)
FINDING: Maintenance costs for CT scanners was excessive.
These excessive costs occurred because competition restrictions
resulted in sole-source awards and because in-house maintenance
service for CT scanners was not considered. Consequently, we
estimated that the lack of competition will increase DoD costs
by $37,466,000 (54 percent) and lack of in-house servicing will
increase costs an additional $26,477,000.
DLA COMMENTS: Nonconcur.
We do not agree with the language "competition restrictions" and
"sole-source" award. See comments under Recommendation 1.
Excessive costs have not been adequately established in the audit, because
of "competition restrictions". The differences in costs of compared
contracts could have been due to numerous other factors besides
"competition restrictions." Elements of required performance (response
time after service call and scheduled availability), types of system (high
or low performance machines), coverage of ancillary components, and
location of hospital may be responsible for the differences,
For example, the maintenance service contract on the systems at
the Naval Hospital, San Diego, CA include servicing two 3M laser
imagers and two independent workstations with separate mainframe
computers. Also, some of the "sole source" contracts cited have
significantly higher costs because the activities are in remote
overseas locations. Without factoring out these other variables, a true
assessment of excess costs cannot be made.
The pricing considerations and comparisons used by the DoD 16 do
not include data reflecting any savings available through total
systems acquisition as opposed to the separate purchase of
system components (equipment and maintenance services). Without
this type of analysis, a true assessment of savings cannot be
made.
The potential savings cited appear to be overstated because
in-house costs are understated. No factor is included to cover
the additional tools and diagnostic equipment needed to support
CT maintenance services. This cost could run as much as $90,000
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per system. Biomedical equipment repairmen are in great demand
and the Services have traditionally experienced difficulty in hiring (due
to lower salaries offered) and retaining trained personnel. The costs
estimated for training CT scanner maintenance personnel makes no allowance
for personnel turnover, or retraining requirements needed based on system
upgrades and replacements.
The possible need for "back-up maintenance" agreements if training is
obtained from Griginal Equipment Manufacturers (QEMs) has also not been
addressed. OEMs usually only give their own employees training on the
full range of maintenance service. In-house personnel with OEM training
would not be able to cover the indirect cost associated with down-time and
would not be able to cover the indirect cost associated with down-time and
contracting for the "back-up maintenance". The parts cost estimate is
extremely low considering the replacement costs for a single CT X-Ray tube
is approximately $35,000. Most moderate to high volume hospitals will
require at least one replacement tube each year.
 A more comprehensive analysis of the potential costs of performing
 n more comprehensive in needed to establish the feasibility of initiating
 in-house maintenance. DPSC will explore alternative methods to provide ET
 Scenner maintenance services.
     () Action is ongoing. Estimated Completion Date
(X) Action is considered complete.
 DISPOSITION:
 INTERNAL MANAGEMENT CONTROL WEAKNESSES:
    (X) Nonconcur. (Rationale must be documented and maintained
           with your copy of the response.)
    ( ) Concur; however, weakness is not considered material.
           (Rationale must be documented and maintained with your
           copy of the response.)
     ( ) Concur; weakness is material and will be reported in the
           DLA Annual Statement of Assurance.
  MONETARY DENEFITS: NONE
                            X/A
  DLA COMMENTS:
  ESTIMATED REALIZATION DATE: N/A
                                         N/A
   AMOUNT REALIZED:
                                         ¥/A
   DATE BENEFITS REALIZED:
  ACTION OFFICER: Martha King, DLA-PPC, x47936, 19 Oct 92
PSE REVIEW/APPROVAL: Billy B. Williams, Deputy Executive
Director of Contracting, DLA-PD,
                                  x46403, 20 Oct 92
   DLA APPROVAL:
                                                        LAWRENCE P. PARRELL, JR.
                                                        Meter General, URAF
                                                        Donaty Director
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FORMAT 2 OF 2 DATE OF POSITION: BENOV 1992 TYPE OF REPORT: AUDIT PURPOSE OF INPUT: INITIAL POSITION AUDIT TITLE AND #: Computed Temography Scanner Maintenance Service Contracts (Project No. 200-8006) RECOMMENDATION: We recommend that the Defense Personnel Support Center open solicitations for the computed tonography scanner maintenance service to all responsible bidders. DLA COMMENTS: Partially Concur Currently, awards for maintenance service are competitive, not "sole source". Maintenance services are part of a comprehensive system (equipment, installation, warranty, etc.) that is solicited and awarded on a competitive basis. This systems approach allows consideration of life cycle costs and use of best value buying procedures, both of which comply with current regulation (DFARS 207.103(h)(ii) and DLAR 4105.1, paragraph 15.613-90(a), see Attachments 1 and 2, respectively). The maintenance requirements are included as an option and are awarded if DPSC determines that the exercise of the option is the most advantageous method of fulfilling the Government's need, price, and other factors considered. We will determine the availability of scanner maintenance services by issuing a "test" solicitation for these maintenance services in lieu of soliciting for an entire systems acquisition that would include equipment, service, warraty, and installation costs. After testing the market, OPSI will be in a better position to determine if this type of solicitation is feasible. , öpse DISPOSITION: INTERNAL MANAGEMENT CONTROL WEAKWESSES:
(X) Monconcur. (Rationale must be documented and maintained
with your copy of the response.)
() Concur; however, weakness is not considered material.
(Rationale must be documented and maintained with your
copy of the response.)
() Concur; weakness is material and will be reported in the
DLA Annual Statement of Assurance. MONETARY BENEFITS: NONE DLA COMMENTS: N/A ESTIMATED REALIZATION DATE: N/A AMOUNT REALIZED: N/A DATE BENEFITS REALIZED: N/A W/Â ACTION OFFICER: Martha King, BLA-PPC, x47936, 19 Oct 92 PSE REVIEW/APPROVAL: Billy B. Williams, Deputy Exacutive Director of Contracting, DLA-PD, x46403, 20 Oct 92 BLA APPROVAL: - A Tanelf ta LAWRENCE P. FARRELL, JR. Major General, URAP Deputy Director

| | SUBPART 207.1-ACQUISITION PLANS |
|--|--|
| 207.103 A | gency-head responsibilities. |
| (c)(i) Milit | ury departments and agencies shall prepare written acquisition plans for |
| (A) | Acquisitions for development, as defined in FAR 35.001, when the total cost of al contracts for the acquisition program is estimated at \$5 million or more; |
| (B) | Acquisitions for production or services when the total cost of all contracts for the acquisition program is estimated at \$30 million or more for all years or \$15 million or more for any fiscal year; and |
| (C) | Any other acquisition considered appropriate by the department or agency. |
| (ii) Writt terms know conti | en plans are not required in acquisitions for a final buy out or one-time buy. The s "final buy out" and "one-time buy" refer to a single contract which covers all m present and future requirements. This exception does not apply to a multiyear act or a contract with options or phases. |
| (d) Prepare paragra may be | written acquisition plans for acquisition programs meeting the thresholds of physics (c)(i)(A) and (B) of this section on a program basis. Other acquisition plans written on either a program or an individual contract basis. |
| (f) The pro response | gram manager, or other official responsible for the program, has overall ability for acquisition planning. |
| (h)(i) Appl | y design-to-cost principles |
| (A) | In all major defense acquisition programs (DoDD 5000.1, Defense Acquisition), unless exempted by the Secretary of Defense; and |
| (B) | To the acquisition of systems, subsystems, and components below the thresholds for major defense acquisition programs, to the extent prescribed DoDD 5000.1. |
| a (ii) - Ooos | ider life-cycle-cost in all acquisitions of systems and equipment. |
| 207.105 C For acquisitic Future Years paper/program | ontents of written acquisition plans. hts covered by pargraphs 207.103(c)(i)(A) and (B), correlate the plan to the DoD Defense Program, applicable budget submissions, and the decision coordinating m memorandum, as appropriate. |
| (a) Acquist | tion background and objectives. |
| (1) \$ L | latement of need. sclude |
| | |

| 15.613 | METERSE LOGISTICS ACCUISITION RECTATION 4105.1 |
|---|--|
| (d) Notify offerors that nical or schedule consistent eidered indicative of a lac mente. | proposals that are unrealistic in terms of tech- its, or unrealistically low in price, will be con- it of understanding of the solicitation require- |
| (e) In conjunction with evaluation standards, and t 1.690-2(b) (also see 15.612 | the source selection plan, the evaluation factors, the acquisition plan, be reviewed as prescribed in (b)(90)(D), 15.612(b)(91)(B), and (0)). |
| 15.613 Alternative source | selection procedures. |
| -15.613-00- Daying best welr | |
| - tajan Polley | |
| Sest value buying procedu selection process by foster demonstrate our uncompromin quality products and servic decisions on the basis of a other than the low offeror Government. Use of best vi would be of benefit in impr contracting officers the av award decisions. | ares can be used to introduce value into the source ring competition on guality as well as price. They sing commitment to buying and supplying the highest ces. Sest value buying procedures encourage award a business judgment and recognise that an award to may represent the overall best value to the maine buying procedures is encouraged where they roving the guality of award decisions and is giving sthority to exercise business judgment in their |
| (b) Definitions. | |
| "Best value buying proces the evaluation for avard p tion procedures, and from | dures" are those procurement procedures applied in rocess, with or without use of formal cource selec- which a best value decision can be made. |
| 15.613-91 Quality Vendor | Program. |
| (a) Quality Vendor Prog the contracting officer's contracts that have bistor recognizes that among resp delivery performance histo | rem is a best value buying procedure. It formalize authority to exercise business judgment in avarding ically been awarded on the basis of price only. It consible offerors, varying degrees of quality and ary exist. |
| (b) When applying this shall consider not only pr performance in arriving at | best value buying technique, contracting officers fice, but also past quantifiable quality and deliver an award decision. |
| (c) General. Existing based on the consideration stated in the solicitation made under the procedures low-priced offeror. | law and regulation authorizes avards to be made a of price and other evaluation factors that are a (see 15.406-5(c)(92) and FAR 15.605). An avard is this subpart may be made to other than the |
| 15-13 | |
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| | |

AUDIT TEAM MEMBERS

David K. Steensma, Director, Contract Management Directorate Salvatore D. Guli, Audit Program Director Macie J. Rubin, Project Manager Roy L. Herman, Senior Auditor Henry P. Hoffman, Senior Auditor Jerry E. Bailey, Auditor David H. Griffin, Auditor Eric A Yungner, Auditor Sara A. Sims, Auditor Margaret Kanyusik, Editor

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