Audit Report

OFFICE OF THE INSPECTOR GENERAL

DIRECT DIGITAL CONTROL EQUIPMENT PROCUREMENT PROCEDURES AT ROBINS AIR FORCE BASE, GEORGIA

Report No. 94-003 October 8, 1993

This special version of the report has been revised to omit contractor sensitive data.

Department of Defense

Acronyms

AFB	Air Force Base
DDC	Direct Digital Control

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

Report No. 94-003 October 8, 1993

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Audit Report on Direct Digital Control Equipment Procurement Procedures at Robins Air Force Base, Georgia (Project No. 3CA-5018)

Introduction

We are providing this report for your information and use. We performed the audit in response to an inquiry from Senator Sam Nunn. The inquiry stemmed from a constituent's allegation of irregularities concerning the procurement of direct digital control (DDC) equipment for use in heating and air conditioning systems procured under maintenance contracts at Robins Air Force Base (AFB), Georgia. The constituent alleged that Robins AFB contracting officers routinely ignored Federal acquisition regulations requiring full and open competition in procuring DDC equipment and that contract F09650-92-C-0292 contained restrictive specifications that favored a particular subcontractor. Also, the constituent alleged that the subcontractor priced a DDC equipment subcontract under contract F09650-92-C-0292 for almost twice as much as the price of the same equipment procured under contract DACA21-92-C-0092 awarded by the Army Corps of Engineers.

Audit Results

Robins AFB contracting officers generally followed appropriate acquisition procedures for procuring DDC equipment; therefore, the allegations regarding contracting irregularities were not substantiated. Contracting officers used competitive award procedures on four of the five maintenance contracts awarded. The one noncompetitive contract award was properly justified and approved. Contract F09650-92-C-0292 did not contain restrictive specifications that favored a particular subcontractor; however, the contract did require installation of a particular brand of DDC equipment determined by Robins AFB officials to be in the interest of the Government. We believe that the requirement to install a particular brand of DDC equipment caused a misinterpretation and misunderstanding, triggering the allegation of favoritism. Also, the audit could not substantiate that the subcontractor overpriced the DDC equipment subcontract under contract F09650-92-C-0292.

Objectives

The primary objective of the audit was to determine whether contracting practices and procedures used by Robins AFB contracting officers in procuring heating and air conditioning systems were in accordance with established

criteria. Specifically, the audit evaluated the DDC equipment procurement procedures at Robins AFB. The audit also evaluated related internal controls.

Scope

Audit Methodology. We reviewed the contracting documents, applicable justification and approval documents, contract specifications and drawings, and contracting procedures used to award the two contracts (F09650-92-C-0292 valued at $498,100 and DACA21-92-C-0092 valued at $532,603) that were specifically cited in the allegation. Additionally, we reviewed the award procedures for four other Robins AFB contracts totaling $887,592 that were awarded between September 6, 1991, and September 30, 1992, involving DDC equipment procurement. We also interviewed the cognizant Government officials and contractor personnel. We did not use computerized data to perform the audit. Enclosure 1 lists the organizations and contractors we visited or contacted during the audit.

Audit Period and Standards. This economy and efficiency audit was performed from May 1993 through August 1993 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.

Internal Controls

We evaluated internal controls related to procurement of DDC equipment for heating and air conditioning systems at Robins AFB. Specifically, we reviewed the self-inspections and internal management control reviews that the Operational Contracting Division, Directorate of Contracting, Robins AFB, performed during FY 1991 and the first half of FY 1992. Our audit disclosed no material internal control deficiencies as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38.

Prior Audits and Other Reviews

No other audit coverage of this specific topic has occurred in the last 5 years.

Background

DDC is state-of-the-art equipment that uses a computer and its associated software to control heating and air conditioning systems through stored programs and real-time sensor measurements. By making only programming changes, DDC equipment offers many different heating and air conditioning control strategies. Thus, DDC equipment enhances heating and air conditioning system performance and energy efficiency.

DDC Equipment Approval. In August 1990, Air Force Logistics Command (now Air Force Materiel Command) approved Robins AFB as a pilot base to install DDC equipment to replace the conventional controls of the base heating and air conditioning systems. Air Force Logistics Command approval to use DDC equipment required Robins AFB to procure DDC equipment compatible with the existing systems on base. Also, Robins AFB was required to limit the number of DDC equipment manufacturers to avoid complications in operation, maintenance, and logistics support.

DDC Procurement Plan. The Robins AFB procurement plan is to acquire DDC equipment from only two different manufacturers. Limiting the manufacturers to two allows for competitive bidding yet avoids having DDC equipment from several manufacturers, which would complicate operation, maintenance, and logistics support. DDC equipment for Robins AFB is procured through maintenance contracts intended for the repair, maintenance, or upgrade of base heating and air conditioning systems.

Discussion

The following are the constituent's two allegations of irregularities related to Robins AFB contract award procedures. The results of our audit are discussed after each allegation.

Allegation 1. Robins AFB contracting officers routinely ignored Federal acquisition regulations requiring full and open competition in procuring DDC equipment. Specifically, the complainant alleged that contract F09650-92-C-0292 contained restrictive specifications that gave Johnson Controls, Inc., favored status as a supplier of DDC equipment.

Audit Results. Between September 1991 and September 1992, Robins AFB contracting officers awarded five contracts totaling $1,385,692 for procurement of DDC equipment. Of the five contracts, Robins AFB contracting officers awarded four contracts based on full and open competition. The fifth contract was a noncompetitive award, which was properly approved and justified. One of the four contracts that Robins AFB contracting officers awarded based on full and open competition (F09650-92-C-0292) required the prime contractor to install Johnson Metasys DDC equipment, a brand of Johnson Controls, Inc. The prime contractor used a subcontractor to obtain and install the DDC equipment. The sole-source requirement to install the Johnson Metasys DDC equipment was fully justified and was made in the best interest of the Government. The summary of our review is discussed below.

Awards Based on Full and Open Competition. Robins AFB contracting officers awarded contracts F09650-91-C-0265, F09650-92-C-0288, and F09650-92-C-0300, totaling $812,049, for building and air conditioning system repair. All of the contracts were awarded to the lowest of three to five bidders after solicitation from approved sources. The award procedures met the requirements of Federal Acquisition Regulation part 6, "Competition Requirements," that all responsible sources be permitted to compete.

Award Based on Noncompetitive Procurement. Robins AFB contracting officers awarded contract F09650-92-C-0219, valued at $75,543, on a sole-source basis to Johnson Controls, Inc., for the upgrade and conversion of the environmental control system in the Logistics Systems Operations Center, building 228. The procurement replaced the existing outdated Johnson Controls DSC-8500 system with the modern Johnson Metasys DDC equipment. The sole-source award was justified and approved because existing system devices, sensors, and environmental control hardware, which are proprietary to Johnson Controls, Inc., would have to be replaced if another vendor was selected, thus increasing the total cost of the project. Additionally, installing the system devices of another vendor would require extensive downtime in the critical operations of the Logistics Systems Operations Center. In our opinion, the sole-source contract award was properly justified and approved in accordance with the requirements of Federal Acquisition Regulation part 6.

Competitive Procurement with Sole-Source Requirement. A Robins AFB contracting officer awarded contract F09650-92-C-0292 to Interstate General Government Contractors, Inc. , the lowest of five bidders, on September 22, 1992. The contract, valued at $498,100, was for the repair and maintenance of the air conditioning system and the replacement of chilled water lines in building 158. Part of the acquisition was to replace the conventional air conditioning controls with DDC equipment. The Robins AFB contracting officer required Johnson Metasys DDC equipment for this purpose as part of the prime contract with Interstate General Government Contractors, Inc.

Sole Source Justification. The Robins AFB contracting officer justified the base requirement for a Johnson Metasys DDC equipment for building 158 under the provision of Federal Acquisition Regulation 6.302-1, "Only One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements." Contract documentation stated that the base would receive Johnson Metasys hardware and software for a central monitoring point in building 272 through Army Corps of Engineers contract DACA21-91-C-0055, which was awarded on July 1, 1991. The monitoring center at building 272 was designed to monitor heating and air conditioning in several buildings on Robins AFB.

Software required to connect building 158 to the central monitoring point in building 272 was proprietary to Johnson Controls, Inc. To accommodate DDC equipment other than the Johnson Metasys DDC, Robins AFB would need to procure a duplicate receiving system, separate operational materials, and separate spare parts. In our opinion, the contracting officer's decision to require a Johnson Controls DDC under the prime contract with Interstate General Government Contractors, Inc., was adequately justified.

Subcontract Procurement Objective. The contract specifications did not contain language restricting the DDC equipment procurement to a Johnson Metasys DDC. However, the contracting officer publicly announced the intention to acquire a Johnson Metasys DDC under contract F09650-92-C-0292 through the Commerce Business Daily and through the issuance of pre-solicitation notices to prospective contractors.

The prime contractor, Interstate General Government Contractors, Inc., received a copy of the pre-solicitation notice on July 13, 1992.

Subcontract Award. On October 15, 1992, Interstate General Government Contractors, Inc., signed a subcontract agreement valued at * with * , to provide DDC equipment. On January 27, 1993, Interstate General Government Contractors, Inc., submitted an Air Force Form 3000, "Material Approval Submittal," for Robins AFB approval of the subcontract. The Robins AFB contracting officer disapproved the submittal because the subcontract would provide an Andover brand of DDC equipment that would not be compatible with the Johnson Metasys hardware and software to be installed at building 272. On April 14, 1993, Interstate General Government Contractors, Inc., signed a subcontract with Johnson Controls, Inc., to provide Johnson Metasys DDC equipment. We believe that a misunderstanding and misinterpretation of the requirement to install Johnson Metasys DDC equipment may have occurred among Robins AFB contracting personnel, the prime contractor, and his prospective subcontractor and may have triggered the allegation.

Allegation 2. Johnson Controls, Inc., priced its DDC equipment under Robins AFB contract F09650-92-C-0292 for almost twice as much as its price for the same item under Army Corps of Engineers contract DACA21-92-C-0092.

Audit Results. We attempted to determine the subcontract price for the Johnson Metasys DDC equipment procured under Army Corps of Engineers contract DACA21-92-C-0092. Since the prime contract was firm-fixed-priced and was awarded based on full and open competition, the contract files did not provide information related to the pricing of the subcontract.

We reviewed the final engineering cost estimate for the new Johnson Metasys DDC equipment procured under Robins AFB contract F09650-92-C-0292. Southeastern Architects: Engineers: Planners, Inc., estimated the cost of the new Johnson Metasys DDC equipment at $134,400. The engineers based their cost estimate on the published General Services Administration price list prepared in accordance with General Services Administration contracts GS-07F-3304A and GS-07F-3224A with Johnson Controls, Inc. The prime contractor actually awarded the subcontract for the Johnson Metasys DDC equipment for * which was less than the engineers' cost estimate. Although we did not determine the actual cost of the DDC equipment under the Army Corps of Engineers contract, the actual price of the DDC equipment under the Robins AFB contract was less than the Government estimate developed by the engineers. The methodology the engineers used to develop the Government estimate was acceptable. Therefore, we could not substantiate the allegation of overpricing.

* Contractor confidential or proprietary data has been deleted.

Management Comments

We provided a draft of this report to the addressees on August 31, 1993. Because the report contained no recommendations, no comments were required of management, and none were received. Therefore, we are publishing this report in final form.

We appreciate the courtesies extended to the audit staff. If you have any questions on this audit, please contact Mr. Richard B. Jolliffe, Program Director, (703) 692-2999 (DSN 222-2999), or Ms. Bobbie Sau Wan, Project Manager, (703) 692-3013 (DSN 222-3013). The planned distribution of this report is listed in Enclosure 2.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosures

This special version of the report has been revised to omit contractor sensitive data.

Organizations Visited or Contacted

Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics), Washington, DC
Comptroller of the Department of Defense, Washington, DC

Department of the Army

Inspector General, Department of the Army, Washington, DC
Army Corps of Engineers, Washington, DC
Army Corps of Engineers, Savannah District, Savannah, GA

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller), Washington, DC
Warner Robins Air Logistics Center, Air Force Material Command, Robins Air Force Base, GA

Non-Government Organizations

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Interstate General Government Contractors, Inc., Savannah, GA
Johnson Controls, Inc., Albany, GA

* Contractor confidential or proprietary data has been deleted.

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Senator Sam Nunn, U.S. Senate

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