

**DECISION**

**THE COMPTROLLER GENERAL  
OF THE UNITED STATES**  
WASHINGTON, D. C. 20548

40947 95243

FILE: B-180645

DATE: July 16, 1974

MATTER OF: Johnson Service Company

- DIGEST:**
1. Delaying procurement and incurring additional expenses to give protester opportunity to modify existing unit and to obtain UL approval or comparable approval from similar organization is not warranted since there is nothing in record to indicate that restriction to named brand was based on other than legitimate agency need.
  2. Requirement that manufacturer shall have successfully operated system for two-year period is not unreasonable considering nature of procurement, part of sophisticated fire alarm system based on computer technology. Furthermore, unsupported contention that named brand manufacturer does not meet two-year requirement, does not constitute basis for questioning determination to include such requirement in solicitation.
  3. Although unconditional requirement in specifications that product must have UL approval is unduly restrictive of competition (see 33 Comp. Gen. 573 (1954)), there is no need to revise specifications since procurement is justifiably restricted to sole-source product which does have UL approval.

This protest, filed prior to bid opening, concerns certain specifications in invitation for bids (IFB) No. DACA45-74-B-0080, issued on January 11, 1974, by the United States Army Engineer District, Omaha, acting on behalf of the Department of the Air Force, which limit the supervisory control system, a subcontract item, to the product of a particular manufacturer and impose a requirement that the manufacturer shall have successfully operated the equipment for a two-year period. For the reasons stated below the protest is denied.

The project which is the subject of this procurement is described as Additions to the Electrical Substation and Distribution System, United States Air Force Academy, Colorado. The

invitation advised bidders that the entire work would be awarded to one bidder. The specifications for the work are divided into General Requirements, Site Work and Removals, Concrete, and Electrical. The Electrical category is subdivided as follows:

1. Electrical-Distribution; Underground
2. Electrical Work, Interior
3. Substation Additions
4. Supervisory Control System

The supervisory control system, although a subcontract item, constitutes a significant portion of this procurement. We are advised that bid opening has been deferred pending our decision on Johnson's protest.

One of the specifications in issue in this protest is paragraph 5.1, on page 16D-2, which originally provided as follows:

"The Supervisory Control System supplied under this contract shall be manufactured by Honeywell, Inc., (Other manufacturers' equipment will not be acceptable. Paragraph 9 of the GENERAL PROVISIONS shall not apply to this equipment.) and shall be totally solid state using computer orientated digital technology. The system must be standard with the manufacturer with respect to all functions and capabilities. The initial installation shall include all push buttons, indicators, switches, pilot lights, digital display annunciators, analog value display, and all other equipment required to make a completely operable system. The initial installation shall include all switches, selection switches, electronics, etc., with capability of 3500 in-put points with no changes or additions to the central processor, hardware or software. The system shall be designed with capability of expansion to 20,000 points or more without adding selection switches or push buttons on the operator's console. The console shall be listed by Underwriters' Laboratories, Inc. for use in a Class A Proprietary

B-180645

System as described in the NFPA Bulletin 72D. Further, the manufacturer shall submit a formal certificate which shows approval by Underwriters' Laboratories, Inc., for compliance of the system as a Class A Proprietary Fire Alarm System."

The effect of the sentence which deletes paragraph 9 of the General Provisions is to preclude the contractor from furnishing any item other than the one manufactured by Honeywell. Paragraph 5.1 was amended on February 12, 1974, to add the following after the word "console" (line 6 from bottom):

"Supervisory control system described herein will in the future be an integral part of a base wide system being installed incrementally. This system is to provide integrated surveillance alarm and control for approximately 1,000 fire detection and reporting stations, building environmental systems for approximately 120 facilities, the base utility system, and base wide security system. The Air Force Academy (AFA) has installed and is operating a Honeywell Delta 2,000 security system. It is intended that the capability exist for future integration of this system into the one base wide system with the interchange of selected signals between the Central Processing Units (CPU). In the event of malfunction either CPU must be capable of operating the entire system. The same data gathering panels and the same transmission system shall be capable of providing all of the above listed functions. The AFA has on order additional Honeywell Delta 2,000 equipment to add fire reporting capability to the system described herein. Other additions are planned for future years; thus, all equipment must be capable of being easily interfaced and components must be interchangeable to comprise as an end result, one total base wide system."

Also in issue in this protest is paragraph 6.12.7 on page 16D-8 of the specifications, which provides as follows:

"Manufacturer's Qualifications.

The manufacturer of the equipment shall have had a complete computerized system in satisfactory operation for a minimum of two years to prove elimination of all faults in design, manufacturing, installation or operation."

Prior to issuing this solicitation, the Air Force prepared a document entitled "Justification For Sole Source Procurement Supervisory Control System", which provides background information as to the events which necessitated this procurement; the technical reasons for limiting the procurement to the Honeywell product; and the justification for the experience requirement. The following portions are pertinent here:

"4. A study was made of the capabilities of the systems on the market and the total requirements that needed to be met at the Air Force Academy. Most of the systems investigated could satisfy the majority of the necessary operational requirements. The requirements which were not inherent in most of the systems investigated are as follows:

"a. The system shall remain operational to transponders in all protected buildings and premises under the fault conditions outlined below:

- (1) A single break.
- (2) A single ground.
- (3) A wire-to-wire short.
- (4) A combination of a single break and a single ground.

"In all of above instances prompt identification of the line facility under fault condition is necessary.

"b. Battery-energized power supplies of sufficient capacity to operate under maximum normal load for a period of four hours must be available for all primary equipment necessary to maintain the central station and the transponders in operation during an outage of normal power.

"c. Conformance to the standards of Underwriters' Laboratories, Inc. for use as Class A Proprietary and central station fire and security reporting equipment is necessary. This is required by AFR 92-1, Section C, Paragraph 9a, AFM 88-15, Paragraph I3-3, and AFM 92-1, Paragraph 2-5. As fire and security reporting capabilities involve the life and safety of personnel and the protection of Government property, it is deemed very important that proper and reliable equipment be utilized to satisfy these requirements. Individual Air Force bases do not have the capability of determining all of the necessary requirements or testing various types of equipment to determine if they meet these necessary requirements. Utilization of Underwriters' Laboratories, Inc. certification or listing is, therefore, necessary to insure proper compliance.

"d. As the end result desired is one integrated system, the ability to interconnect and interface with existing equipment at the Air Force Academy was deemed essential from an economical standpoint. Further, it is necessary that in the smaller structures one data gathering or field panel be capable of fulfilling all the requirements for fire reporting, security reporting, and utility supervisory control capabilities. It would be impractical to have different components partially utilized to fulfill each of these requirements. Interchangeability of items of equipment and parts will greatly facilitate installation and maintenance of the system and reduce drastically the funds invested in parts inventory.

\* \* \* \* \*

"f. Due to the need for maximum protection of lives, equipment and mission, it was deemed necessary that the system procured has been installed and operating in a satisfactory manner with a minimum of malfunctions for a period of time sufficient to prove its reliability. Proper operation for a minimum period of two years is essential before consideration can be given to any equipment."

The Air Force Justification also states that in June 1971 a Honeywell Delta 2000 system was installed to meet the requirement for security alarm reporting and we have been advised that this procurement was on a sole-source basis from Honeywell. The cost of that system is reported to have been \$71,364. The Air Force's Justification states as follows with respect to certain interface problems that would be encountered if the product of another manufacturer were introduced:

"6. Most supervisory control systems are similar in the end results accomplished. The method of accomplishing these end results vary considerably from manufacturer to manufacturer. A supervisory control system is a sophisticated system based on computer technology and composed of a large number of individual equipment items. Due to the different methods of accomplishment of the same end result, equipment items from one manufacturer will not interface with items from a second manufacturer. Some of the different methods of obtaining the same results are listed on Attachment 1. This information has been gathered from the literature furnished by the various manufacturers and from discussions with their representatives. For the systems to properly interface it would be necessary for almost all of the items listed to be identical. From an engineering standpoint the most important items indicating noncompatibility are the signal composition and the transmission rates. A supervisory control system takes digital or analog data from such common elements as contact operation, thermocouples, motor switches, flow measuring devices, pressure interducers, etc., and converts this data to a type of serial transmission signal which is acceptable and understandable to the rest of the system. The receipt of a pulse chain or frame generated by one manufacturer's equipment would appear as a transmission error or gibberish to a CPU of another manufacturer. This would result in the nonreceipt of vital alarm and command signals. This could result in very serious consequences. To utilize systems of two different manufacturers in an interconnected mode would require much duplication of functions and equipment and would

require additional modes at every point of interconnection. Modes of this type are not commercially available. To utilize systems of two different manufacturers in a side-by-side mode would require such a duplication of equipment and cabling as to be uneconomical and wasteful of Government resources."

At a meeting on May 6, 1974, held at our Office, attended by Johnson, the Engineers and the Air Force, Johnson's representatives made a technical presentation explaining how the Johnson JC/80 system could meet the Air Force's needs. The Johnson representatives conceded that while certain modifications to the JC/80 system would be necessary to obtain UL Class A approval, these modifications could be accomplished without any difficulties. The Johnson representatives further advised that an application had been submitted to UL for Class A approval and that Johnson expected to have such approval shortly. In order to overcome the interface problems the Johnson representatives advised that a computer would be added to their system which could decipher the output of the presently installed Honeywell unit.

We asked the Office of the Chief of Engineers (OCE) to furnish us with its current views on the acceptability of Johnson's product in light of Johnson's technical presentation at the May 6 meeting and we also requested OCE to furnish information as to the time and expense that would be incurred if the specifications for the supervisory control system were revised to include Johnson's product. In a supplemental report dated May 16, 1974, OCE has advised as follows:

"4. The total estimated time for all the work [to revise the specifications] is sixteen weeks. Estimated costs should the invitation be revised are as follows:

Architect-Engineer Fees		
119 hours @ \$24 per hr -		\$2,900
Air Force Academy Engineering Costs:		
80 hours @ \$20 per hr -		1,600
Missouri River Division Engineering Costs:		
40 hours @ \$20 per hr -		800

Omaha District Engineering Costs:		
160 hours @ \$18 per hr		2,880
Estimated increases in contract costs:		
(Escalation)		<u>19,250</u>
	TOTAL	27,430

"5. It should be noted that the costs in time and money set forth above are estimated. They are based upon optimum procurement conditions and do not include time for additional amendments, if necessary, nor do they include indirect Government costs such as printing, clerical help and legal review.

"6. In contrast, the estimated time for reinstating the bid opening date and receiving bids, if the specifications remain unaltered, is two (2) weeks.

"7. In considering the Protest in general, the Government again asserts that at the time the current specifications were drawn and issued only the Supervisory Control System manufactured by Honeywell, Inc. was deemed to comply with the minimum needs of the Government. That position has not changed. Johnson Service Co. readily admits that their JC80 System does not have the required UL rating nor does it meet the two (2) year experience requirement necessary to insure the Government of a system which has proven itself capable of quality uninterrupted service at low maintenance cost over the useful life of the system."

Johnson argues that standardization considerations do not justify a disregard of the general policy against restrictive specifications and that potential future equipment is being used to justify the sole source restriction of the supervisory control system. Johnson states that Honeywell itself could not meet the two year experience requirement at the time of drafting these specifications and that if the existing Honeywell system were connected with a UL approved system, the new integrated system would not be UL approved. Therefore, Johnson questions whether these requirements were established in good faith as the Government's minimum requirements. In addition, Johnson asserts that the Engineers' supplemental report demonstrates that the Government's initial study was inadequate since it has been admitted that if the

IFB is revised it will be necessary for the architect-engineer to expend additional time familiarizing himself with other systems in order to properly evaluate them. Johnson urges that if the initial study had been more detailed it might not be necessary to do additional research and investigation at this time. Johnson contends that the estimated escalation factor of \$19,250, included in the Engineers' estimated additional costs if the specifications are revised is conjectural and that the costs might actually decrease if the supervisory control system were opened to competition. Johnson further states that while the components of one manufacturer often will not directly interface with the components of another manufacturer it does not follow that interfacing the systems of two manufacturers is not feasible or that such interfacing would require duplication of functions. For all these reasons Johnson asserts that even if the specifications did fairly express the Government's minimum requirements these needs can be met by Johnson. In this regard, Johnson has reiterated that it has applied for UL Class A approval for its system.

In explanation of the escalation estimate the Engineers have advised that if this procurement is delayed for the period of time necessary to revise the specifications, it will not be possible to begin construction until the spring of 1976 because of the necessary lead time for producing the specified transformers whereas if the procurement proceeds on the basis of the present specifications there is a good possibility that construction could begin by the spring of 1975.

It appears that Johnson's product has not obtained UL Class A approval or comparable approval from a similar organization. Rather it is undisputed that Johnson's unmodified JC/80 system with the UL Class B approval does not incorporate the appropriate wiring necessary to obtain UL Class A approval. In nontechnical terms the "series" wired circuit in Johnson's unmodified JC/80 system is analogous to the situation where if one light is extinguished all of the lights go out; whereas in the "parallel" wired circuit, necessary to obtain UL Class A approval, the lights work independently of each other and extinguishing some of the lights will not affect the functioning of the other lights.

In effect Johnson has asked that the procurement be delayed until it modifies its JC/80 system and then obtains UL Class A approval or comparable approval from a similar organization. Contrary to Johnson's assertions, we find that there is a reasonable basis for the Engineers' conclusion that there will be a substantial delay in the procurement and escalation in costs if the procurement is delayed for the period of time necessary to qualify Johnson's product and to revise the specifications. Since there is nothing in the record to indicate that the restriction to Honeywell's equipment was based on other than the agency's legitimate needs, we do not believe that the Government should be required to delay the procurement and incur the additional expenses attributable to such delay merely to qualify another product.

With regard to the experience requirement in paragraph 6.12.7 of the specifications, we do not believe that this is unreasonable considering the nature of the procurement. Furthermore, there is no evidence in the record to support the contention that Honeywell will not be able to meet this qualification; therefore, we do not find that this contention constitutes a basis for questioning the determination to include the requirement.

In view of the factors outlined above, we believe there is a justifiable basis for restricting the procurement to the Honeywell product. Specifically, the record shows that in order to permit the procurement to proceed on a timely basis it is necessary to restrict the procurement to the sole-source product. In this connection, ordinarily we would regard a specification containing an unconditional requirement for UL approval as being unduly restrictive of competition. 33 Comp. Gen. 573 (1954); B-163459, April 19, 1968. However, since this procurement justifiably is restricted to the Honeywell product anyway and since this product does have UL approval, we believe the procurement properly may proceed on the basis of the present specifications.

We recognize that unless some action is taken at this time to qualify other manufacturers' equipment, only Honeywell will be an acceptable source for future additions to the system.

B-180645

Accordingly, we recommend that the Corps of Engineers in conjunction with the Air Force Academy give immediate attention to devising appropriate steps to open future procurements of additions to the system to competition to the maximum practicable extent.

A handwritten signature in cursive script, appearing to read 'R. G. ...', is written over the printed title.  
Deputy Comptroller General  
of the United States