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DECISION



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

FILE: B-186543

DATE: October 8, 1976

MATTER OF: Dominion Engineering Works, Ltd., et al.

DIGEST:

1. Award should not be made under a solicitation where the bids received do not offer a product which satisfies the agency's actual design requirement, even though bids may have been responsive. Rather resolicitation is justified.
2. Although agency should have revised its specification on resolicitation to identify its design requirement, award may be made to low bidder if design is responsive to specification and satisfies agency's needs, since no other bidder is prejudiced.

The Allis-Chalmers Corporation (Allis-Chalmers) and the General Electric Company, on behalf of its affiliate, Dominion Engineering Works, Ltd. (Dominion Engineering), protest action taken by the Corps of Engineers (Corps) in rejecting all bids and cancelling solicitation DACW57-76-B-0090, an advertised procurement for eight Kaplan type hydroelectric turbines. The Corps has resolicited the requirement under IFB DACW57-76-B-0213.

This matter is also the subject of a suit filed by Dominion Engineering in the United States District Court for the District of Oregon, in which Dominion Engineering sought to prevent the opening of bids on the resolicitation, and seeks to enjoin the Corps from awarding any contract except to Dominion Engineering. The case is for consideration under § 20.10 of our Bid Protest Procedures, upon the Court's request for our decision. 4 C.F.R. § 20.10 (1976).

The initial solicitation was issued March 5, 1976, and resulted in three bids, as follows:

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(1) Dominion Engineering Works, Ltd.	\$33,144,240
(2) Nissho-Iwai American Corporation and Fugi Electric (a joint venture)	\$33,409,000
(3) Allis-Chalmers Corporation	\$30,752,265

By letter to the Corps' Portland District Office dated May 11, 1976, the Nissho-Iwai and Fugi Electric joint venture protested any award to Dominion Engineering. A similar protest was lodged in this Office by Allis-Chalmers on May 18, 1976.

The pendency of these protests resulted in review of the procurement by the Corps' Office of Chief Counsel. Also, at its request, the contracting officer's findings were reviewed by the Engineering Division of the Office of the Chief of Engineers.

Although both the contracting officer and the Corps' North Pacific Division had found the Dominion Engineering and Allis-Chalmers bids to be responsive (the joint venture bid was viewed as non-responsive), the Engineering Division found all bids to be nonresponsive. This Office was so advised by a report dated July 27, 1976. Protests against this action were filed in this Office on August 5th, and 6th, by Dominion Engineering and Allis-Chalmers, respectively. By letters dated August 10, 1976, the bidders were formally advised of the rejection of their bids, and of the Corps' decision to resolicit this procurement.

The resolicitation was issued over the objections of both Dominion Engineering and Allis-Chalmers, with bid opening scheduled for September 1, 1976. The initial order of bidding was reversed, and the bids appear as follows:

(1) Allis-Chalmers Corporation	\$28,900,000
(2) Nissho-Iwai Fugi Electric	\$30,980,000
(3) Dominion Engineering	\$32,447,240

Moreover, we are informally advised by the Corps that the Allis-Chalmers bid on resolicitation is not subject to the objection which the Corps took to its bid on the original solicitation, and is acceptable.

The Corps does not maintain that the differences in original and resolicitation bid prices reflect price unreasonableness.

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Further, although the resolicitation included several changes in the specifications, they are not viewed by the Corps as justifying resolicitation; nor do they have any bearing on our consideration of this case.

I. Background

The general configuration of a Kaplan type hydroelectric turbine is illustrated in figure 1. Basically, a Kaplan turbine is a machine of considerable size, vertically mounted on concrete foundations which in turn form a channel or passage through which water passes. The intake portion of the channel is of a spiral design. Water is directed toward the center of the turbine and down past a set of "propellers," i. e. runners, after which the water is discharged through an outlet channel. Except for size, ruggedness, and control features, the turbine is not unlike a propeller horizontally suspended in a drain.

The turbine assembly includes the structure from which the runners and conical hub are suspended. The structure is divided into three parts: (1) a stay ring embedded in the upper boundary of the intake channel; (2) an annular outer head cover; and (3) an inner head cover. In addition, the turbine includes a circular array of vanes known as "wicket gates." The wicket gates may be opened and closed to control the flow of water into the turbines. The gates pivot on shafts or "stems" extending through the outer head cover (above) and into the bottom ring (below). Also, the pitch of the runners is controllable through the use of a blade servomotor, located in the runner hub in the Dominion Engineering design.

Both the Allis-Chalmers and Dominion Engineering initial bids were rejected because the Corps found that their respective bid drawings failed to allow for inclusion of radial bolts and filler plates at the joint connecting the turbine's outer head cover and stay ring. The Dominion Engineering bid was found to be non-responsive, further, because (1) its bid drawing appeared to require partial disassembly of the turbine's wicket gate stems in adjusting wicket gate height, and (2) its design failed to show three required oil seal rings, an omission which the Corps believed might require extension of the runner hub. The protesters dispute these findings. (The location of these points of dispute are indicated in the illustration.)

The Allis-Chalmers protest against award to Dominion Engineering focuses on one additional issue; whether the Dominion

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LOCATION OF PARTS SUBJECT TO DISPUTE:
(1) OUTER HEAD COVER AND STAY-RING JOINT
(2) STEM ADJUSTMENT MECHANISM
(3) BLADE SERVO MOTOR
(CONTAINED IN HUB)

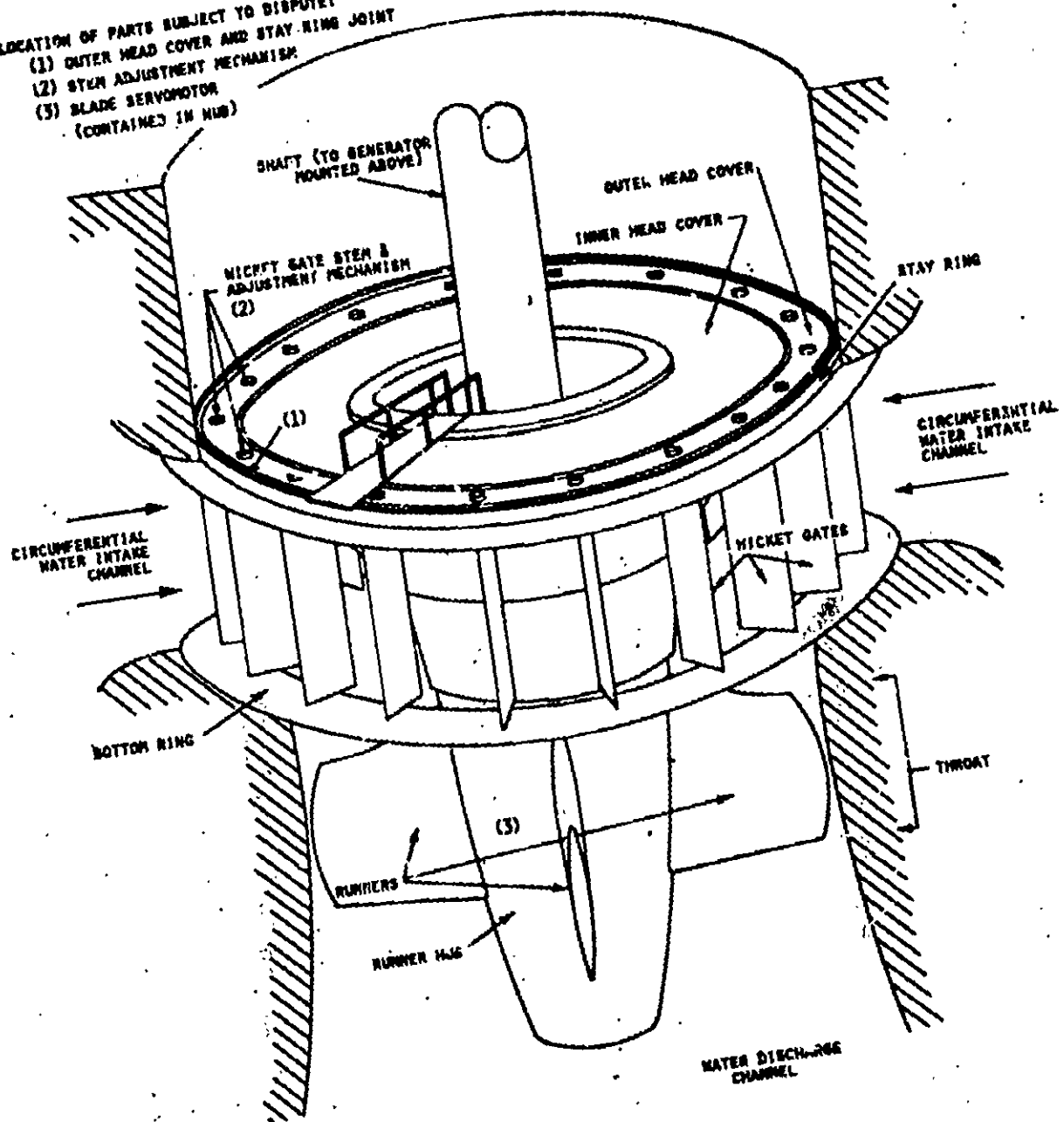


FIGURE 1
SIMPLIFIED ILLUSTRATION OF KAPLAN TYPE TURBINE
(CHANNEL BOUNDARIES AND FOUNDATION SHOWN CUT AWAY)

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Engineering bid was nonresponsive for failure to include a list of foreign components (and countries of origin) to be incorporated in its proposed domestic end product.

II. The Radial Bolt and Filler Plate Issue

Regarding the Corps' determination that the original Allis-Chalmers and Dominion Engineering bids required rejection because their bid drawings failed to allow for inclusion of radial bolts and filler plates at the outer head cover/stay ring joint, paragraph 2-13.1 of the specifications provided:

"The head cover in conjunction with the stay ring shall be designed to form a rigid assembly. Filler plates shall be provided for insertion in the annular clearances between the stay ring and the outer unit and between the outer unit and the inner unit, which are to be fitted and welded in place during field assembly. A radial bolt shall be provided above each filler plate to insure rigid assembly of the three parts."

According to the explanation given by the Corps' technical personnel at a protest conference held in our Office on September 9, 1976, the Corps had experienced considerable difficulty in prior installations, where a simple lip-type joint was used. Such a joint (depicted in figure 2(B)) allows more than an acceptable amount of flexing at the joint. This deformation interferes with the proper functioning of the wicket gates, because it results in distortion of the outer head cover, housing the wicket gate stems.

In the Corps' rejection letters dated August 10, 1976, Dominion Engineering and Allis-Chalmers were advised respectively that their bid drawings indicated the use of a design which placed a circumferential bolting ring at the bottom of the outer head cover, eliminating "the box section construction." A box or box-like section construction is illustrated in figure 2(A), based on the Corps' explanation at the protest conference. The relevant portions of the Dominion Engineering and Allis-Chalmers bid drawings are shown in figures 3(A) and 3(B).

It appears that the Corps anticipated receiving bids incorporating a bolted box-like joint. The August 10th letters further stated that the requirements of the specifications could only be met if the bolting flange or lip shown were located at least midway between

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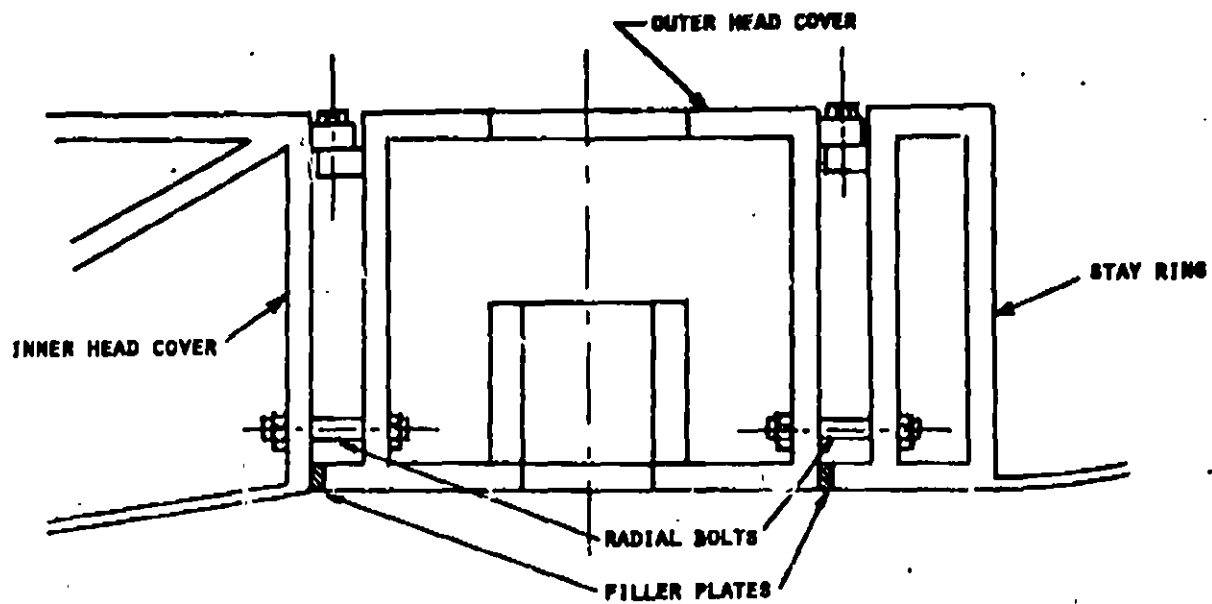


FIGURE 2(A)
BOX-LIKE HEAD COVER & STAY RING ASSEMBLY

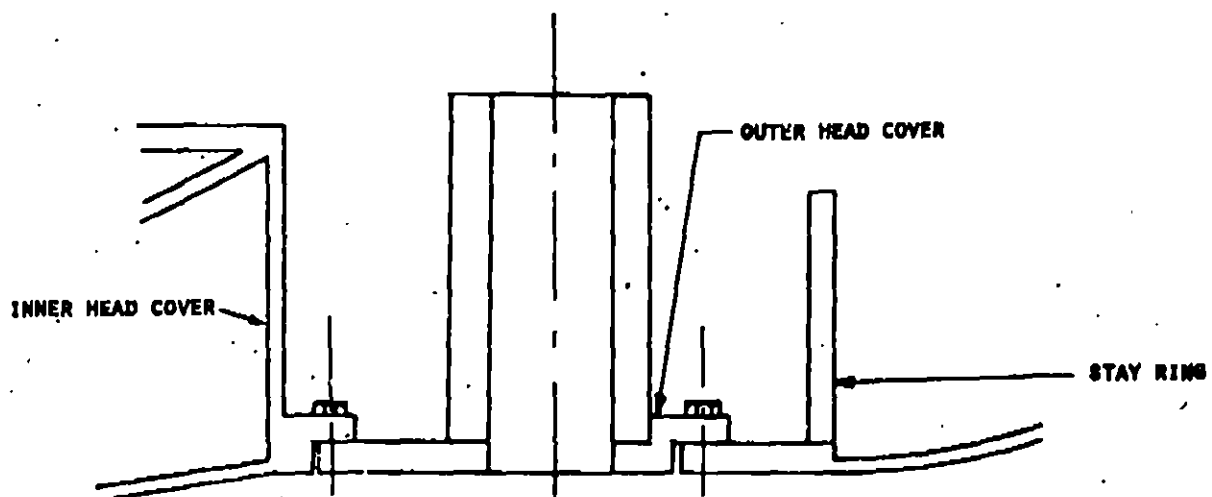


FIGURE 2(B)
LIP TYPE ASSEMBLY

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FIGURE 3(A)
PORTION OF DORINION ENGINEERING BID
DRAWING SHOWING HEAD COVER AND STAY
RING JOINTS

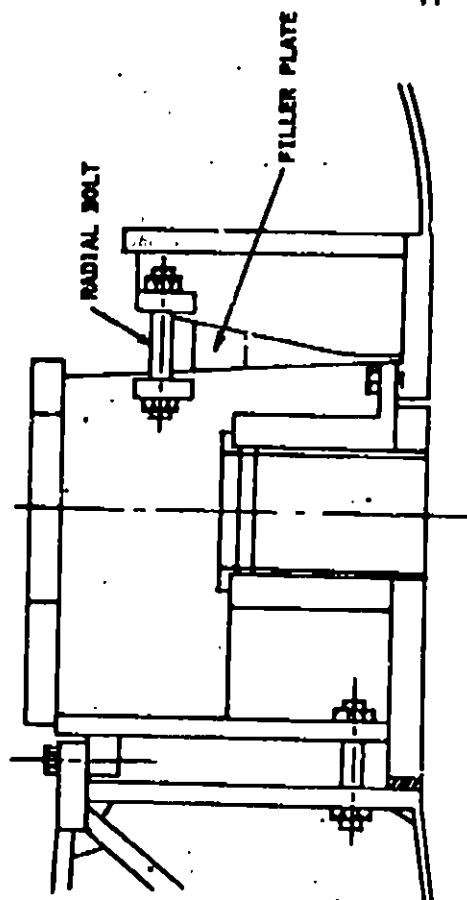


FIGURE 3(C)
ADDITIONAL DETAILS -- DORINION ENGINEERING DESIGN

FIGURE 3(A)
PORTION OF ALLIS-CHALMERS BID
DRAWING SHOWING HEAD COVER AND STAY
RING JOINTS

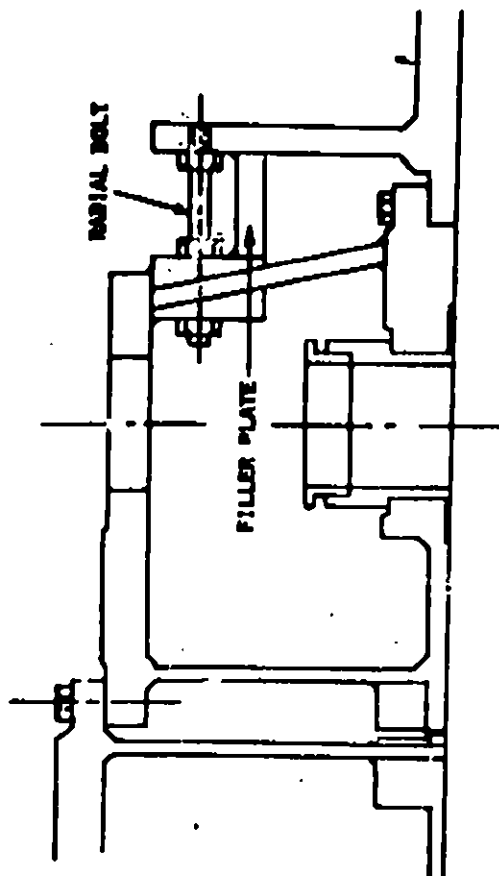


FIGURE 3(D)
ADDITIONAL DETAILS -- ALLIS-CHALMERS DESIGN

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the top and bottom of the outer head cover, to allow space below to install the required radial bolts and plates.¹ Based upon the Corps' assumption that a particular geometrical relationship was required between these parts, the Corps found the Allis-Chalmers and Dominion Engineering bids nonresponsive, because it concluded that their proposed designs left the outer head cover/stay ring joint free to flex about a simple lip.²

While we are satisfied that both Allis-Chalmers and Dominion Engineering intended to fully comply with their view of the specifications' requirements, the details of their intended connection of the outer head cover and stay ring were omitted from their bid drawings. Both have since submitted drawings showing additional detail. (See figures 3(C) and 3(D).) The additional drawings indicate the use of radial bolts and filler plates.

It would appear that the failure of the drawings to show the required bolts and plates was not dispositive, of itself. The specifications required that bolts and filler plates also be utilized in the joint between the inner and outer head covers. As indicated in figure 3(A), the Dominion Engineering bid drawing showed what might have been intended to be a horizontal bolt line between the inner and outer head covers. The Allis-Chalmers bid drawing (figure 3(B)) shows no bolt center lines. Both bidders' drawings show the box-like design at this point, and the responsiveness of their designs as to that aspect was not questioned.

² There appears to have been confusion even within the Corps concerning the meaning of paragraph 2-13.1 of the specifications. The paragraph refers to rigidity, but not to a box-like design. Following receipt of the August 10th letter, explaining the reasons for rejection, Dominion Engineering wrote the Corps' Portland District Office, indicating that the letter stated a design requirement which was not indicated by the technical specifications. By letter dated August 27, 1976, the contracting officer wrote both protesters:

"It has been determined that the requirements of 2-13 do not specifically dictate the arrangement described in our 10 August letter. Alternate designs are acceptable [for purposes of resolicitation] provided that the requirements for rigidity are met using the specified radial bolts and filler plates."

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Commenting on the design details supplied in the additional drawing submitted by Dominion Engineering, the Corps states that:

"* * * this drawing still does not comply with the specifications since the flanges upon which the radial bolts are attached and the bolts themselves would still flex under the strenuous vertical forces involved, allowing the entire connection to flex, and thus still not providing a rigid assembly as required by the specifications. The design proposed by Dominion would have cost considerably less than the design required by the specifications and was accordingly considered a major deficiency. * * *"

A similar objection is raised against the design shown in the Allis-Chalmers supplemental drawing.

Although the Corps contends that paragraph 2-13.1 of the specifications (quoted earlier) requires a rigid connection, rigidity is a relative term. No design is absolutely rigid. No one contends that the protesters' intended designs are not considerably more rigid than the simple lip configuration which the Corps initially thought was being proposed. The protesters assert that their intended designs are rigid. Personnel from the Corps' Engineering Division expressed the view at the protest conference that the required degree of rigidity can only be obtained through use of some kind of box-like design.

III. Rejection of Bids as Nonresponsive

While responsiveness must be determined on the face of the bid at opening, the protesters contend that the details shown in their supplemental drawings were not required to be shown on their respective bid drawings. They offer the additional drawings to explain their position that: (1) details were not required to be included in their bids; (2) their offered products fully comply with the IFB requirements; (3) the drawings submitted with their bids do not show nonresponsiveness; and (4) consistent with the IFB, the additional details can and would be supplied in contract drawings.

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In this regard, Dominion Engineering maintains that:

"* * * the proposed contract requires that 'the contractor shall...perform, in strict accordance with the detailed requirements of these specifications, all the work necessary to design, [and] to prepare outline and detailed drawings' * * *. That work is a contract requirement, not a bidding requirement, which the successful contractor is to perform following the award of the contract, in accordance with Special Condition SC-3.

"It is Dominion's position that its bid drawings were prepared in accordance with the customs and practices of the hydraulic turbine industry and show all the detail required by the solicitation* * *."

Further, Allis-Chalmers maintains that:

"* * * While the intent of Paragraph 2-13.1 [requiring use of radial bolts and filler plates] is clear as to the requirements for head cover construction, * * * bidders were not required by virtue of that section of Paragraph 4 * * * to disclose in detail in their Bid Drawings how they intended to meet those requirements.

"This is entirely consistent with our experience in connection with other bids to the Corps of Engineers for which no such detail was required at the time of bidding nor did absence thereof prevent an award to Allis-Chalmers for such projects. The features called for are standard requirements of Corps of Engineers Kaplan turbine specifications and are in no way unique to the Bonneville turbine solicitation."

In procuring technically sophisticated equipment for specialized purposes, an administrative agency may require bidders to supply identified descriptive data regarding specific components of items being procured. Cummings Diesel Engines, Inc., 55 Comp. Gen. 999 (1976), 76-1 CPD 248; 48 Comp. Gen. 859, 860 (1969), and cases cited therein.

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The Armed Services Procurement Regulation (ASPR) § 2-202.5(d) (1) (1975 ed.) provides that:

"When descriptive literature is required, the invitation for bids shall clearly state what descriptive literature is required, the extent to which it will be considered in the evaluation of bids, and the rules which will apply if a bidder fails to furnish it before bid opening or if the literature furnished does not comply with the requirements of the invitation * * *." (Emphasis added.)

See also, 48 Comp. Gen. 659, 660, supra.

Following the general form prescribed by ASPR § 7-2003.31(a), paragraph 4.1, of part C, of the IFB stated that:

"* * * The descriptive literature is required to establish, for the purposes of bid evaluation and award, details of the products the bidder proposes to furnish as specified in 4.3 below* * *."

Paragraph 4.3 did not further explain the purpose or extent to which the data would be considered. However, it required that listed information and other descriptive data be furnished. Included among these numerous required items, subparagraph (2)(a) required the submission of:

"Drawings, including an axial cross-sectional drawing and photographs or cuts, showing the general construction and overall dimensions of the turbine proposed. The drawings shall show the details of construction of the blade servomotor and blade operating mechanism, the governing dimensions, including the elevation of the center line of the stay ring, the elevation of the center line of the runner, the elevation of the shaft coupling, principal dimensions of the spiral case outline, the diameter of the stay ring, the height of the stay ring, the diameter of the runner, the diameter and elevation of the draft tube throat, and the principal dimensions of the draft throat. The drawings shall also show the clearances necessary for assembly and

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dismantling the turbine, including assembly of the runner and shaft with the inner head cover and shall also contain a detail showing the method of adjusting and maintaining the adjustment of each wicket gate in the mid-position between the head cover and bottom ring." (Emphasis added.)

We agree that the foregoing must be read in conjunction with those other provisions of the IFB which indicated that design refinement was to be a matter for contract performance, i. e. that detailed design drawings and model testing were to be performed after contract formation, as part of contract performance. Model testing was prescribed under Part IV of the specifications ("Model Test"), requiring the construction and extensive testing of a scale model, subject to review, witness and approval by Corps personnel. Indeed, the demonstration of the capabilities of the intended design through model testing is but one stage in the anticipated design of a prototype turbine.

Paragraph SC-3.1 required submission of drawings bearing on foundation and powerhouse construction within 90 days of award, subject to changes which might be required following performance of model tests. Further, paragraph SC-3.2 provided, in material part:

"The contractor shall subsequently submit for approval sectional drawings of the complete turbine, including a vertical section through the unit, a horizontal plan section at the top of the spiral case and servomotors, and such additional assembly and sub-assembly drawings and data as are specifically requested to demonstrate fully that all parts of the equipment to be furnished will conform with the provisions and intent of the specifications. * * *"
(Emphasis added.)

Thus the contract drawings were to demonstrate compliance with the specifications. Accordingly, it appears that only general preliminary drawings had to be submitted with a bid to assure the Corps that it was founded on a generally correct understanding of the Government's requirements.

From the foregoing, we conclude that a bidder's failure to submit drawings showing the use of radial bolts and filler plates in the joint between the stay ring and outer head cover did not

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render its bid nonresponsive to the specification since paragraph 4.3(2)(a) did not require in either specific or general terms that the bid drawings demonstrate the details of the method of attachment proposed. Nor do we believe it can be asserted that either bidder intended to qualify its bid by failing to include details not called for.

We are aware that the Corps did not consider the designs initially intended to be offered to be adequate to insure sufficient rigidity. It may not consider all of the designs offered under the resolicitation to be adequate. As indicated, rigidity is relative. Both bidders maintain that their respective designs are adequate to insure trouble-free operation over the life of the turbine. In our view, the meaning which must be given to the term "rigid" is specified by paragraph 2-13.1 of the specification, quoted earlier. That specification anticipated an assemblage of the stay ring and inner head cover, in which rigidity is insured by the use of radial bolts and filler plates. If the Corps felt that the bending characteristics of the joint should have been further restricted, or that only particular geometries would be adequate, such requirements could have been easily included in the specifications.

IV. Conclusion

We conclude that Dominion Engineering and Allis-Chalmers responded reasonably to the specified requirement for a rigid outer head cover/stay ring joint. In reviewing the bids, the Corps concluded that the performance proposed--and even as more fully explained by the protesters after bid opening--would not satisfy its actual needs. No Government agency should be required to expend public funds in the procurement of something which it has determined reasonably and in good faith does not satisfy its requirements.

Ideally, the IFB should have correctly described the Government's requirements in the first instance. Unfortunately, the ideal is achieved less often than it is sought. In the circumstances, the original solicitation should have been cancelled, and resolicited under revised specifications, once it was realized that the original specifications had not resulted in bids meeting the Government's minimum needs. Such revised specifications should have been written to assure that a satisfactory design was proposed on resolicitation. While all bids may be rejected after bid opening and the procurement may be resolicited only for cogent and compelling reasons, we think the present situation met that standard. Cf., Allied Contractors, Inc., B-186114, July 19, 1976, 76-2 CPD 55.

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However, the procurement has been resolicited without the necessary revisions having been made. Bids were opened. While generally the use of inadequate specifications would require a third round of solicitations, because bidders may have been misled to their competitive detriment, we do not believe that a third round of solicitations is required in the circumstances of this case.

As indicated, the Corps regards the low bid submitted by Allis-Chalmers on resolicitation incorporating the box section design desired by the Corps as offering a joint having sufficient rigidity. In its report of September 16, 1976, the Corps indicates this design is considerably more expensive than the designs offered. In any case, it is clear that if the low bid under the second solicitation is responsive to the Corps' intention, it is also responsive to the written specifications. Therefore, if otherwise proper, we see no prejudice if award is made to the low bidder.

In the absence of prejudice, there is no cogent or compelling reason for cancellation of the resolicitation, provided that the design offered by the low bidder meets the Corps actual technical requirements and is otherwise acceptable. Cf. GAF Corporation, 53 Comp. Gen. 586, 592-593 (1974), 74-1 CPD 68; contrast, The Intermountain Company, B-182794, July 8, 1975, 75-2 CPD 19.

In view of the foregoing disposition, we do not find it necessary to consider the other issues raised in the course of the protest. By separate letter, we are advising the Secretary of the Army that the specifications should be revised as indicated if they are to be used in any future solicitations.

Deputy

R. J. Keller
Comptroller General
of the United States