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Theodore Rasso
Proc. I

DECISION



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

FILE: B-187338

DATE: February 23, 1977

MATTER OF: Keystone Diesel Engine Company, Inc.

DIGEST:

1. Protest against IFB specifications received in GAO 2-1/2 hours prior to bid opening and communicated to contracting agency by GAO within 1 day after receipt and bid opening is filed timely, since Bid Protest Procedures require protests against alleged improprieties in IFB to be filed prior to bid opening and "filed" is defined in Bid Protest Procedures as receipt in GAO.
2. Where before bid opening potential subcontractor protested that agency's IFB specifications restricted 2-cycle engines from contract and subsequently award was made to prime contractor, recommendation is made that specifications in prime contract be amended appropriately to allow for 2-cycle engines, since notwithstanding agency's position, 4-cycle engines are not inherently more quiet, less polluting, or mechanically more reliable than 2-cycle engines and over projected operating load-range (and in view of intended use) difference in fuel consumption is insignificant.

By letter dated August 31, 1976, Keystone Diesel Engine Company, Inc. (Keystone), a potential subcontractor, protested the allegedly restrictive specifications of Veterans Administration (VA) invitation for bids (IFB) 646-1-T, for the procurement of an 1800 RPM 4-cycle emergency diesel engine generator and the repair of electrical deficiencies at VA Hospital 646, Pittsburgh, Pennsylvania. Specifically, Keystone, a supplier of Detroit Diesel 2-cycle diesel engines, contends that by specifying a 4-cycle diesel engine design, the VA unduly restricted its specification. It is Keystone's position that the 2-cycle diesel engine can meet or exceed the specification's performance requirements. Award of a contract by the VA was made on December 30, 1976.

The VA first challenges the timeliness of the protest, contending that its representative was telephonically advised of the protest by GAO only after bids were opened on August 31, 1976, at 1:30 p.m. Our Bid Protest Procedures, 4 C.F.R. § 20.2(b)(1) (1976), provide that protests based upon alleged improprieties in an IFB which are apparent prior to bid opening must be filed prior to bid opening. "Filed" is defined in our Procedures, 4 C.F.R. § 20.2(b)(3) (1976), as "receipt * * * in the General Accounting Office * * *."

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The record indicates (and the VA concedes) that the instant protest was received in our Office at 11:01 a.m., approximately 2-1/2 hours prior to bid opening on August 31, 1976, and that the VA was telephonically advised of the protest on September 1, 1976, within the time prescribed by our Bid Protest Procedures, 4 C.F.R. § 20.3(a) (1976). Therefore, despite the fact that the VA was not advised of the protest until after bids were opened, the protest must be considered as timely.

With regard to the merits of the protest, the original specification, based upon VA Master Construction Specification Section 804 (May 23, 1973), called for either a 2-cycle or 4-cycle diesel engine with an operating speed "not to exceed" 1200 RPM. However, Amendment No. 4 to the IFB, dated August 17, 1976, changed the specification to a 4-cycle design exclusively. Additionally, the operating speed was changed to "not to exceed" 1800 RPM. In a letter to the contracting officer dated September 7, 1976, Hornfeck Engineering, Inc. (Hornfeck), the architect-engineer for the project, described why these changes were made:

"* * * [B]ased on the fact that there only appeared to be two (2) suppliers of 1200 RPM engines in the size specified, instructions were received from Washington to amend the speed to 1800 RPM. Since, the [Hospital] has one 1800 RPM, 2-cycle diesel engine (with which they have never been satisfied) they asked if there were at least three (3) suppliers of 1800 RPM, 4-cycle diesel engines. We assured them that there were more than three (3) suppliers of 1800 RPM, 4-cycle diesel engine-generator sets. Thus Washington agreed to an Amendment which would change the engine speed to 1800 RPM, and limit this to 4-cycle engines."

Additionally, the VA, although not questioning Keystone's assertion that the 2-cycle engine can meet or exceed the specification performance requirements, claims the following advantages for the 4-cycle diesel design over the 2-cycle diesel design: (1) the 4-cycle is quieter than the 2-cycle; (2) the 4-cycle is mechanically more reliable and requires less maintenance than the 2-cycle; (3) the 4-cycle produces a less smokey exhaust than the 2-cycle (the VA apparently bases this conclusion on its experience with its 1800 RPM 2-cycle diesel engine referred to above in Hornfeck's September 7 letter); (4) the 4-cycle is more fuel efficient than the 2-cycle. With regard to points (1) and (3) above, the VA notes that these are particularly significant features in the hospital environment in which use of the diesel generator is contemplated. However, there are no noise and emission requirements stated in the IFB.

Keystone, on the other hand, disputes these assertions. Keystone states:

"There are various parameters used to determine an engine's mechanical reliability in terms of basic design criteria; two of these parameters being the piston speed of the engine and the brake mean effective pressure (B.M.E.P.) exerted on the cylinder components to produce useful output. In both areas the Detroit Diesel 2-cycle engine surpasses the competitive 4-cycle diesel. Our engine has a piston speed of between 17% and 23% slower than the competition (depending upon manufacturer) and a B.M.E.P. rating of between 20% and 24% lower than that same competition. The slower the piston speed and the lower the B.M.E.P. the longer the engine should live. * * *

"As far as overall sound levels are concerned, the Detroit Diesel 2-cycle turbo-charged and inter-cooled engine is capable of meeting or in some cases surpassing the sound levels of an equivalent 4-cycle 1800 RPM competitive diesel. * * *

"Advantages of the 2-cycle should also be pointed out. The Detroit Diesel engine will start, come up to rated speed, and accept the load in less time than any of the 4-cycle competition. This is due to the fact that every stroke of the 2-cycle engine is a power stroke whereas only every other stroke of a 4-cycle engine produces power."

With regard to the allegedly smokey exhaust of the VA's 1800 RPM 2-cycle diesel engine generator presently in use at the Pittsburgh facility, Keystone indicates that its recent survey of this generator found that rather than being inherent in the 2-cycle design, the smokey exhaust problem was due to undersized piping and could be solved by replacing " * * * the outdated 'S' series fuel injection components presently in the subject engine * * * with current production 'N' series components * * *."

With regard to the comparative fuel consumption characteristics of the 2-cycle and 4-cycle diesel designs, Keystone has introduced evidence which refutes the VA's claim that the 4-cycle diesel engine is more fuel efficient than the 2-cycle engine. Keystone's evidence indicates that, on the contrary, under certain operating conditions, the 2-cycle diesel engine consumes less fuel than the comparable 4-cycle diesel engine.

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We have recognized that the determination of the needs of the Government, the methods for accommodating such needs, and the responsibility for drafting proper specifications reflective of such needs are primarily the responsibility of the contracting agency. Jarrell-Ash Division of the Fisher Scientific Company, B-185582, January 12, 1977; Maremont Corporation, 55 Comp. Gen. 1362 (1976), 76-2 CPD 181; Johnson Controls, Inc., B-184416, January 2, 1976, 76-1 CPD 4; 38 Comp. Gen. 190 (1958). It is proper for a contracting agency to determine its needs based on its actual experience, engineering analysis, logic or similar rational bases. Bowers Reporting Company, B-185712, August 10, 1976, 76-2 CPD 146. Though specifications should be drawn so as to maximize competition, we will not interpose our judgment for that of the contracting agency unless the protester shows by clear and convincing evidence that the agency's judgment is in error and that a contract awarded on the basis of such specifications would be unduly restricting competition be a violation of law. Jon R. Stafford, B-184822, November 18, 1975, 75-2 CPD 324; Globe Air, Inc., B-183396, June 26, 1975, 75-1 CPD 389.

In Dobbs Detroit Diesel, Inc., B-182992, May 29, 1975, 75-1 CPD 326, we considered an issue similar to that in the instant case, involving the relative merits of the 4-cycle versus the 2-cycle diesel engine. The protester in Dobbs contended that its bid, in response to an IFB which specified a 4-cycle design, should not have been rejected merely because of the 2-cycle diesel design which it offered. Like the instant case, the protester in Dobbs alleged that the 2-cycle engine could meet the specification's performance requirements.

In response to Dobbs' allegations, the agency report indicated that the 4-cycle design was preferred inter alia because a 4-cycle diesel engine could operate longer without overhaul than a comparable 2-cycle diesel engine. The protester disputed this contention. We stated:

"* * * [T]he 'state of the art' of two-cycle engines has advanced notably in the last 10 years and that, all factors being equal, the two-cycle engine could very well be equal to the four-cycle engine. * * * [G]enerally speaking, the time between overhauls, general

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maintenance requirements, and type of fuel required is comparable between the two and four-cycle engines. While it is agreed that the two-cycle engine does require a blower to scavenge the burned exhaust gases, * * * the extra power used by the blower, in light of other considerations, is a minimal factor at most and should not warrant serious consideration."

In view of this finding, we recommended that upon resolicitation (which we recommended based upon our finding that all bids were nonresponsive) consideration be given to revising the specification to allow a 2-cycle engine to be offered. Parenthetically, we observe that upon resolicitation the agency so revised the specifications.

In the instant case, based upon the available engineering evidence, we conclude that 4-cycle diesel engines are not inherently more quiet, less polluting, or mechanically more reliable than 2-cycle diesel engines and that over its projected operating load-range (and in view of its intended use) the difference in fuel consumption between the 2-cycle and 4-cycle designs is insignificant.

Based on this finding, and in consideration of our conclusion in Dobbs with regard to equality between "state of the art" 2-cycle and 4-cycle diesel engines, we conclude that by exclusively requiring a 4-cycle diesel engine design the instant VA specification is unduly restrictive of competition.

In the circumstances, and since the prime contractor has advised that it has not placed an order for the diesel engine, we recommend that the VA take appropriate action to amend the specifications in the prime contract in order that a 2-cycle engine may be offered for the project.

As this decision contains a recommendation for corrective action to be taken, it is being transmitted by letters of today to the congressional committees named in section 232 of the Legislative Reorganization Act of 1970, 31 U.S.C. § 1172 (1970).

Acting


Comptroller General
of the United States