



Comptroller General
of the United States

Washington, D.C. 20548

Decision

Matter of: CVD Equipment Corporation

File: B-239916

Date: October 4, 1990

Leonard A. Rosenbaum for the protester.
L. James Tillman, Department of Energy, for the agency.
David Ashen, Esq., and John M. Melody, Esq., Office of the
General Counsel, GAO, participated in the preparation of the
decision.

DIGEST

Award to higher priced, higher rated offeror is proper where
awardee's higher combined technical/price score reasonably
reflected its superiority with respect to the demonstrated
prior performance of equipment to be used for state-of-the-
art research, the single most significant evaluation
criterion.

DECISION

CVD Equipment Corporation protests the award of a contract
to Aixtron, Inc., under request for quotations (RFQ) No. 42-
9813, issued by Sandia Corporation for a metal organic
chemical vapor deposition system (MOCVD). Sandia is a prime
contractor of the Department of Energy (DOE), managing and
operating Sandia National Laboratories on behalf of DOE.
CVD challenges the evaluation of proposals.

We deny the protest.

MOCVD systems are used to prepare compound semiconductor
materials to be integrated into a computer chip. In a MOCVD
system, reactant gases, usually of a highly toxic nature,
are transported to a reaction chamber where they react to
form the desired compound and are deposited or grown on a
substrate material, typically a crystal wafer. According
to the agency, and as stated in the solicitation, Sandia's
research effort requires that the latest, state-of-the-art
MOCVD technology be employed to produce improved semiconduc-
tor material so as to increase the performance of a new
generation of computers. The agency reports that even a
slight change in the process parameters--e.g., the flow
rate of reactant and carrier gases, the level of pressure in

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the reaction chamber, or differences in pressure between the gas lines leading to the reaction chamber--will influence the physical characteristics of the resulting semiconductor material. In particular, according to the agency, any source of contamination will adversely affect the electronic quality of the material.

Sandia's emphasis upon technical considerations was reflected in the evaluation plan set forth in the solicitation; of the 1,000 available evaluation points, technical criteria accounted for 700 points and price for only 300 points. The single most important technical evaluation criterion was "process guarantee," for which 130 points were available; under process guarantee, the specifications established detailed performance requirements which the MOCVD system must meet. Furthermore, the solicitation generally required that offerors "describe in detail how the system being proposed meets or satisfies all of the mandatory" requirements and furnish "enough information to verify adherence to the Statement of Work." In addition, the RFP specifically required under the criterion for service experience (worth 35 points) that offerors furnish the names of at least two customers "who have recently taken delivery on similar systems" and provide detailed drawings and schematics.

Five offerors submitted proposals in response to the solicitation; four, including CVD and Aixtron, were included in the competitive range, advised of areas in their proposals requiring clarification or amplification and requested to submit best and final offers (BAFOs). Aixtron's BAFO received the highest overall score, 866 points; Aixtron received the highest technical score, 636 points, and another 230 points for its evaluated price, \$733,061 after addition of a 12 percent Buy American factor (\$78,542). CVD received the third highest overall score, 761 points, including 515 technical points and 246 points for its price (\$684,724). Upon learning of the resulting award to Aixtron, CVD filed this protest.

CVD challenges the evaluation of its technical proposal, questioning Sandia's determination that its proposed MOCVD system was less advantageous than Aixtron's. Specifically, CVD challenges the agency's technical experts' finding that CVD's system (1) permitted temporary imbalances in the level of pressure between the lines introducing gas into and venting it away from the reaction chamber; (2) did not provide for "real-time" adjustments to process variables during the growth process; (3) provided a less effective mechanism for preventing the release through the exhaust line of phosphorus, a highly reactive material that burns

spontaneously and sometimes violently in air; (4) provided less effective means for preventing contamination; and (5) did not provide for an alarm system sufficiently flexible to alert workers to potentially hazardous conditions while at the same time providing the capability of adjusting for malfunctioning detectors. CVD also questions the evaluation of offered prices.

In reviewing protests of allegedly improper evaluations, our Office will not substitute its judgment for that of the agency evaluators, but instead will examine the record to determine whether the agency's judgment was reasonable and in accordance with the listed criteria and whether there were any violations of procurement statutes or regulations. McCollum and Assocs., B-232221, Nov. 10, 1988, 88-2 CPD ¶ 470. Although we have reviewed all of the specific allegations by CVD, we need not discuss each of them since it is clear that Sandia otherwise possessed a reasonable basis for its selection of Aixtron.

As indicated above, the single most important evaluation criterion was process guarantee, setting forth the detailed performance requirements which the MOCVD system must meet, for which 130 points were available. Sandia reports that due to the enormous complexity of MOCVD systems and the variety of possible approaches to producing the desired semiconductor material, it is difficult to evaluate the relative merit of different systems based solely on their design characteristics. Sandia indicates that for this reason its evaluation gave great weight to whether an offeror had documented demonstrated performance of its proposed system. Aixtron's higher score under the process guarantee criterion (125 points), 68 points higher than CVD's score (57 points), accounted for nearly two-thirds of Aixtron's overall 105-point advantage and reflected Sandia's determination that Aixtron had submitted sufficient information to document the demonstrated material quality of the semiconductor material produced by its proposed MOCVD system. Specifically, Sandia notes that Aixtron cited in its proposal 37 articles from scientific and technical journals documenting the results obtained using Aixtron systems and that many of the articles described the growth of very high quality material using the low pressures required by the specifications. In addition, Sandia reports that it received favorable evaluations when it contacted the customers referenced in Aixtron's proposal which were using systems very similar to that proposed for Sandia.

Sandia indicates that, in contrast, CVD proposed an entirely new and untested MOCVD system and failed to supply any data

concerning the critical, electronic quality of the semiconductor material produced by the system. Further, Sandia indicates that when it contacted two of the references furnished by CVD, it learned that they were not growing semiconductor materials at the low pressures required for Sandia and, in any case, the two references indicated they had to make significant modifications to their systems before they performed to the specifications. While CVD claims that these modifications were in the nature of system upgrades, it concedes that the systems in question were built more than 5 years ago and that MOCVD technology has improved significantly since then. Although CVD also furnished an advertisement by another of its customers describing certain research using a CVD system, Sandia notes that this concerned a system different from that specified in its proposal and that the customer indicated that the results were only preliminary.

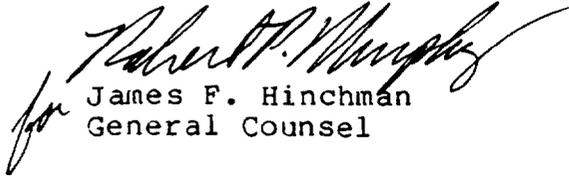
We find no basis upon which to question Sandia's evaluation under the process guarantee criterion. Although CVD points out that it guaranteed meeting the performance requirements in the specification, the solicitation required offerors to describe in detail how their systems would meet the mandatory requirements and to furnish "enough information to verify adherence to the Statement of Work." In our view, the agency reasonably evaluated Aixtron's proposal as significantly superior under the process guarantee criterion on the basis that it more conclusively documented, and thereby "guaranteed," the ability to meet the performance requirements set forth under the process guarantee section of the specifications. See EAP Consultants, B-238103, Apr. 4, 1990, 90-1 CPD ¶ 358 (general statements of compliance are insufficient to comply with solicitation requirement for specific information necessary to establish compliance with the specifications).

Another 21 points of Aixtron's 105-point advantage resulted from its evaluated superiority under the service experience criterion. Sandia reports that Aixtron received 35 points, compared to CVD's 14 points, because Aixtron's references uniformly reported receiving excellent service, while CVD's references gave only mixed responses with respect to the quality of service. CVD has not challenged, nor do we find any basis to question, Sandia's evaluation in this regard.

An agency is not required to make award to a firm offering the lowest price where, as here, the RFP does not specify that cost will be the determinative factor. Minigraph, Inc., B-237873.2, May 14, 1990, 90-1 CPD ¶ 470. Here, the RFP contained a specific weighting formula and Sandia gave cost the proper weight in determining the overall superior

proposal. In view of Aixtron's evaluated superiority with respect to demonstrated performance and service record, we conclude that Sandia reasonably determined Aixtron's proposal to be most advantageous to the government. Id.

The protest is denied.


for James F. Hinchman
General Counsel