

Mr. Gary



Comptroller General
of the United States

Washington, D.C. 20548

Decision

Matter of: EG&G Astrophysics Research Corporation

File: B-241171

Date: December 28, 1990

Robert E. Cohen, Esq., for the protester.
James C. Nemiah, Esq., for American Sciences and Engineering, Inc., an interested party.
Althea Kearney, Department of the Treasury, for the agency.
Stephen J. Gary, Esq., and John M. Melody, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

DIGEST

Sole-source award of a contract is proper where the contracting agency reasonably determined that it required a mobile X-ray system utilizing proprietary "backscatter" technology which could be supplied by only one source, and where the agency complied with the statutory procedural requirements for a sole-source award.

DECISION

EG&G Astrophysics Research Corporation (EG&G) protests the sole-source award of a contract to American Sciences and Engineering, Inc. (AS&E), under request for proposals (RFP) No. CS-90-084, issued by the U.S. Customs Service, Department of the Treasury, for mobile X-ray equipment. EG&G contends that Customs improperly determined that AS&E was the only responsible source capable of meeting the agency's needs.

We deny the protest.

Customs initially awarded a contract to AS&E in 1986 for the development and delivery of a prototype mobile X-ray system for use in finding drugs, currency, and weapons concealed in cargo and baggage; under the same contract, after finding the prototype fully satisfactory, Customs then purchased 18 production models of the AS&E system. When a need arose in 1990 for five additional mobile inspection systems, Customs determined, based on the agency's favorable field experience with the initial AS&E units and on tests it had conducted of other available products in the intervening years, that its needs could be met only by the AS&E product. Consequently, in

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May 1990 the agency executed a justification for other than full and open competition, approved by the Competition Advocate upon the recommendation of the Competition Review Board, for the procurement of five AS&E mobile X-ray systems. The justification was based primarily on AS&E's unique and proprietary "Flying Spot MICRO-DOSE" and associated "backscatter" X-ray technology, which the agency had determined was better able to disclose concealed contraband in typical Customs inspections than any other X-ray system;^{1/} it cited, as authority for the agency's sole-source procurement of the AS&E system, 41 U.S.C. § 253(c)(1) (1988), which permits a sole-source procurement where there is only one known responsible source and no other type of property or services will satisfy the agency's needs. On June 27, Customs published in the Commerce Business Daily (CBD) a notice of intent to purchase five mobile X-ray systems from AS&E on a sole-source basis. The synopsis stated that the agency would purchase 3/4-ton vans equipped with low-dose X-ray systems including, among other things, X-ray backscatter imaging for low atomic number elements; that, although there was no solicitation, any responsible source responding to the synopsis would be considered; and that any such response must convey clear and convincing documentation of the advantages to the government in considering another source and demonstrate the ability to meet the government's requirements.

In July, EG&G responded to the synopsis with documentation on its vans and X-ray systems, a copy of a contract that had been awarded to the firm by the Army for a mobile X-ray system, and an invitation to Customs to attend a demonstration of the EG&G system that was being delivered under the Army contract. Technical personnel from Customs attended the demonstration on July 13 and concluded that the demonstration and EG&G's latest technical information confirmed that EG&G's X-ray imaging technology would not meet the agency's needs.^{2/} At the

^{1/} The justification also cited several other features of the AS&E product, such as its ability to operate with a 50-percent lower level of x-radiation exposure to the operator than the level associated with use of the EG&G equipment; according to Customs, its tests indicated that the AS&E equipment was unequivocally the safest available in the security x-ray systems market, and offered the least potential health risk to Customs personnel.

^{2/} Customs also concluded that the EG&G equipment did not meet its specifications in other respects, such as excessive height that would prohibit its use in confined areas where some inspections are carried out; lack of dual-fuel capability, especially the inability to be powered by propane, (continued...)

demonstration, for example, a small suitcase containing a tape recorder, with three of its six batteries removed and replaced with simulated drug contraband, was placed in the EG&G X-ray system; the resulting X-ray image did not reveal the contraband, which was obscured by the three remaining batteries. When the agency performed the same test a week later with the AS&E X-ray equipment, the contraband was detected. In August, when the agency determined that it would require five mobile systems in addition to those previously synopsised, Customs executed an additional formal justification that specifically included the results of this evaluation of EG&G's equipment.^{3/} On September 7, Customs advised EG&G of its intent to proceed with the sole-source procurement. EG&G then filed its protest of the proposed award. On September 29, Customs awarded a contract to AS&E after executing a determination and finding that, since delay of the award would greatly impact the seizure of drugs, currency, and weapons, it was in the best interest of the government that the procurement proceed notwithstanding the protest. See Federal Acquisition Regulation (FAR) § 33.104.

EG&G argues that, given the opportunity, it could have demonstrated that its own proprietary X-ray imaging technology, designated "E-Scan," was at least equal to AS&E's backscatter system and would have met the agency's needs. According to EG&G, the July demonstration of the EG&G system delivered to the Army was not indicative of EG&G's ability to meet Customs' needs, because the system demonstrated had been designed specifically to meet the Army's requirements. The protester further asserts that, despite its repeated requests for the precise specifications of the system required by Customs (as distinct from the general description in the CBD), such specifications were not provided to EG&G until it had filed its protest. Consequently, EG&G concludes, it never had an opportunity to provide a clear and convincing demonstration that it could meet the agency's needs; having now seen the specifications, EG&G is prepared to demonstrate that it can satisfy Customs' needs in a timely manner.

2/ (...continued)

which is required for inspections in unventilated areas where the use of gasoline would result in hazardous levels of carbon monoxide; and the need for operation by more than one person. In view of our finding below that the product did not meet the agency's needs with respect to x-ray imaging, we need not consider these additional determinations.

3/ The agency published a CBD notice on August 27 announcing that the number of units to be purchased from AS&E under the sole-source procurement would be increased to 10.

Customs responds that the CBD description of the system being procured, referring to AS&E's proprietary "backscatter" technology, was sufficient for any competitor, including EG&G, to know exactly what was required by the agency. In support of this position, the agency notes that when the protester submitted detailed technical information on its product in response to the CBD synopsis, EG&G specifically stated that its product was superior to the specified AS&E technology in terms of overall image quality, penetration, orientation, and throughput; according to Customs, absent a thorough knowledge of the capabilities of the AS&E backscatter technology, EG&G would not have been able to make such a comparison. In any case, the agency argues, even if EG&G had been given detailed specifications for the system the agency required, the firm would not have been able to provide a compliant product, since the AS&E technology is proprietary to that firm and no other system can duplicate its unique capabilities.

The Competition in Contracting Act of 1984 (CICA), 41 U.S.C. § 253(c)-(1) (1988), permits an agency to use noncompetitive procedures where there is only one responsible source that can satisfy the government's needs, provided that the agency executes a written justification for doing so. 41 U.S.C. § 253(f); FAR §§ 6.303 and 6.304. Because the overriding mandate of CICA is for "full and open competition" in government procurements, 41 U.S.C. § 253(a), our Office will closely scrutinize sole-source procurements under the exception to that mandate provided by 41 U.S.C. § 253(c)(1). Neogen Corp., B-237530, Feb. 16, 1990, 90-1 CPD ¶ 194. Where an agency has substantially complied with CICA's procedural requirements for the written justification and approval of the contemplated sole-source action and publication of the requisite CBD notice to solicit offers, we will not object to the sole-source award unless it is shown that there is no reasonable basis for it. Id.

Customs has complied with all relevant procedural requirements. As noted above, the agency executed the required sole-source justification, citing the authority of 41 U.S.C. § 253(c)(1), and, as required by FAR §§ 6.302-1(c)(2) and 5.201, synopsisized its proposed action in the CBD. Further, as required by 41 U.S.C. § 253(f)(1), the agency gave consideration to all proposals received in response to the synopsis. (Only EG&G and AS&E responded.) Finally, although the justification set forth the reasons why only AS&E's product was considered able to meet the agency's needs, it also provided that the agency would review all relevant specifications to insure that they reflect the agency's minimum needs, and would revise them wherever possible to incorporate technological advances and to foster competition. See Neogen Corp., B-237530, supra.

Beyond compliance with procedural requirements, we find that Customs has provided a reasonable justification for conducting this procurement on a sole-source basis. The record shows that Customs did evaluate developments in X-ray technology prior to the procurement and that the agency was well acquainted with EG&G's product in particular. The record includes, for example, an internal agency memorandum, written in September 1987 by an equipment specialist in the agency's Contraband Detection Laboratory, evaluating EG&G's E-Scan technology based on tests conducted during an EG&G sales demonstration. In these tests, which the memorandum emphasizes involved a relatively simple detection task, simulated explosives concealed in an electric razor and a portable cassette tape player were completely undetected by the EG&G system, regardless of whether the "explosives" were turned to face either the X-ray source or the detector. These tests were viewed as confirming earlier findings by the Laboratory with respect to EG&G equipment, namely, that if the target explosive or narcotic substance is masked by an object that is just dense enough to obscure the additional light density of the target, the target will not be detected by the X-ray system; this was the case whether the masking object was in front of or behind the target.

Similarly, at least one agency study comparing the two systems concluded that EG&G's technology was inferior to AS&E's because it depended more on X-ray penetration of the dense masking material. In the EG&G system, X-rays of two different energies must each penetrate an object before the presence of lower-weight material that is masked by denser material can be detected. In the AS&E system, on the other hand, according to this study, X-rays excite the concealed low atomic weight organic compounds and produce a shower of X-ray energy that is directed back towards the X-ray sources. Since X-ray energy is more readily "backscattered" by organic compounds than by the high atomic weight inorganic materials typically used to conceal them, sensitive X-ray detectors receive the "backscatter" data as a separate channel of information that is unique to the presence of compounds of low atomic weight. The result is a separate image of the concealed compounds. In other words, unlike the EG&G system, X-ray penetration of the dense masking material is not necessary for the AS&E system to disclose concealed lighter weight substances.

The record also includes a report of a drug seizure by Customs that indicates that the agency had a reasonable basis for concluding that AS&E's system would perform better than EG&G's in actual use in the field. The drugs were concealed in a shipment of bars of dense material designed to imitate candy. When the candy-like bars were x-rayed with AS&E equipment, which displays a standard X-ray image on one screen and

separate backscatter image on another screen, the standard screen showed "black," indicating that the X-rays had not penetrated the high-density material; the second screen, however, displayed the low atomic weight backscatter image from the lower-density material, and thus clearly showed the presence of concealed contraband. Again, according to this report, because the EG&G system uses X-rays of two different energies (65 KV and 140 KV), both of which must penetrate an object before the presence of lower-weight material can be detected behind higher-density material, the contraband would not have been detected by EG&G's equipment; the 65 KV X-ray could not have penetrated the high-density "candy" used to conceal it.

We note that EG&G has not disputed the specific technical findings included in the Customs documents that were made available to the firm in the course of the protest;^{4/} rather, EG&G merely asserts that, given an opportunity, it could have demonstrated that its own system also would have met the agency's needs. Given our finding, however, that Customs reasonably determined that AS&E's backscatter technology would better detect contraband in the course of its inspections, and the fact that EG&G actually had an opportunity to demonstrate its system when Customs accepted EG&G's invitation to view the Army demonstration, the argument is without merit. EG&G has not shown that its technology is comparable to AS&E's for Customs' intended use of the X-ray equipment and, based on the record, we find no reason to believe that the result would be different if EG&G were afforded additional opportunities to establish its system's capabilities.

Since it is clear that Customs complied with all procedural requirements and had a reasonable basis for determining that only the AS&E product could meet its needs, we find that the sole-source award is proper.

The protest is denied.


for James F. Hinchman
General Counsel

^{4/} The documents consist of a technical attachment to the agency's justification for a sole-source procurement, dated July 31, 1990; a treatise evaluating the two systems written by an agency official in January 1988; and a memorandum written in April 1988 reporting the successful use of the AS&E system in a drug seizure and indicating that the EG&G system would not have disclosed the contraband.