



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

092183

30917

B-177220

May 14, 1973

Hercules Incorporated
900 Market Street
Wilmington, Delaware 19899

Attention: Mr. D. H. Little
Chief Engineer

Gentlemen:

Further reference is made to your letter dated October 10, 1972, and subsequent correspondence, protesting on behalf of your firm and J. A. Jones Construction Company, a Joint Venture (Hercules-Jones), against the award of contracts to Chemical Construction Company (Chemico) under the second step of formal Two-Step procurements, issued on May 5, 1972, by the District Engineer, United States Army Engineer District (Corps of Engineers), Mobile, Alabama.

Requests for Technical Proposals (RFP) DACA01-72-R-0013, DACA01-72-R-0014, and DACA01-72-R-0015 were issued on December 12, 1971, January 3, 1972, and January 4, 1972, respectively, and all were opened on February 17, 1972. The enumerated RFPs, Step One of the referenced Two-Step procurements, requested proposal for the design, construction and performance testing of nitric acid-sulfuric acid concentration plants (NAC-SAC) at Badger Army Ammunition Plant (AAP), Baraboo, Wisconsin; Radford AAP, Radford, Virginia and Sunflower AAP, Lawrence, Kansas. At this juncture we think it will be helpful to quote the contracting officer's layman's explanation and description of the services and facilities being procured. At page 7 of his report to our Office he stated:

Without getting into the complicated chemistry involved, the Nitric Acid - Sulfuric Acid Concentration Plant, as outlined in the RFP (0013), consists of Nitric Acid Concentration Units and Sulfuric Acid Concentration Units combined into a single plant to describe a general process requirement. The nitric acid concentration side is capable of taking a blended feedstock containing nitric acid, or a weak nitric acid feedstock, and concentrating the nitric acid to higher strength. Likewise, the sulfuric acid

[Protest of Army Award for Construction of
Chemical Plant]

PUBLISHED DECISION
52 Comp. Gen. _____

715912

BEST DOCUMENT AVAILABLE

B-177220

concentration side is capable of taking a blended feedstock containing sulfuric acid, or a weak sulfuric acid feedstock, and concentrating the sulfuric acid to higher strength. When the two processes are erected side by side as a single plant and are fed a blended feedstock containing amounts of both nitric acid and sulfuric acid, two physically separated products are obtained, i.e., strong nitric acid on one side and strong sulfuric acid on the other.

Of the four technical proposals received under the first step, only the proposals of Hercules-Jones and Chemico were found acceptable and, in the second step, these firms were invited to submit priced bids under invitations Nos. DACA01-72-B-0085, -0088 and -0090 for Badger, Radford and Sunflower, respectively.

When bids were opened on June 15, 1972, Hercules-Jones was the apparent low evaluated bidder under -0085 (Badger AAP), while Chemico was the apparent low bidder under -0088 (Radford AAP) and -0090 (Sunflower AAP).

By a telegram dated June 16, 1972, and supplemented by its letter of June 22, 1972, Hercules-Jones protested to the Corps of Engineers any award because of alleged discrepancies between the values assigned by the two bidders in the evaluation format in the IFBs. In a letter dated July 21, 1972, your firm questioned whether Chemico met the experience requirements outlined in the solicitation. Consequently, the three proposals and bids of both firms were reviewed by technical personnel of the Mobile District and Catalytic, Inc., the retained Architect-Engineers, to determine the validity of the protest and the responsiveness of the bids. As a result of the review it was determined that Chemico had submitted bids which were in accordance with their previously accepted technical proposal and were responsive to the requirements of the invitation for bids. The review also disclosed that Hercules-Jones' bids were nonresponsive under all three invitations because they had understated the HNO_3 feed acid and net consumption of H_2SO_4 by a considerable amount for all three projects and the stated yield of H_2EO_4 was in excess of 100 percent on all three bids.

Following a conference held on July 13, 1972, between representatives of your firm and the Corps of Engineers, Hercules-Jones was

B-177220

formally notified by the Corps on August 14, 1972, that its bids were determined to be nonresponsive because of the above-stated reasons. By letter of the same date your firm was advised that the Corps had considered the merits of your protest and had found Chemico's bids to be responsive to the terms of the invitations, and should Hercules-Jones desire to pursue further its protest that it should do so within 10 days of receipt of the letter. There followed an additional conference on August 28, 1972, between the interested parties, and on October 4, 1972, the Corps officially denied your protest and on that date award was made to Chemico on all three projects:

Since the issues raised by your protest can be resolved in principle by considering only one of the three Two-Step solicitations, we will confine our consideration of the merits of the case to the Badger project.

As amended, RFP 0013 devoted some eighty pages to "Technical Criteria" under Appendix B, and under Appendix C. 10 pages of the solicitation dealt with the "Method of Evaluation" to be employed in selecting the bid which would result in the lowest total annual cost to the Government at the design capacity specified. RFP -0013 contained in pertinent part the following provisions concerning offerors' experience:

Section 1, paragraph A.(3):

* * * Offeror should cite his specific experience in the design and construction of facilities of the type being proposed. * * * The technical proposal shall also include a list of plants, which the offeror has completed, that use a similar process to manufacture the same product from similar raw materials. * * *

Appendix B, Section II. General Requirements.
Paragraph A.:

Equipment and Materials of Construction. All equipment and material intended for incorporation in these units shall be new; of good quality; manufactured by companies regularly engaged in the manufacture or production of such equipment or materials and designed for the purpose intended. Standard items of equipment are

preferred, and the offeror must be prepared to demonstrate satisfactorily to the Evaluation Board that any design, equipment, materials or metallurgy he intends to employ has had at least two years' successful operation in a facility of the same general type and service as that proposed in the technical proposal.

Appendix C, Sections II, A.5 and 6:

5. Offeror's experience: The offeror must demonstrate to the satisfaction of the Evaluation Board, that his organization has the required specific experience in nitric sulfuric acid concentration plant design and construction to accomplish the work to the best interests of the Government.
6. Process Experience: The offeror must demonstrate, to the satisfaction of the Evaluation Board, that the process and the equipment proposed are based on proven technology, and that all components have performed satisfactorily in an operating plant of similar design in commercial or government operation for a period of not less than two (2) years.

Concerning blended feedstock requirements, RFP 0013 contained the following relevant statements:

Section I, paragraph A.4:

4. The technical proposal shall describe in detail the facility to be furnished by the offeror. It shall include but not be limited to process flow diagrams, plot plans, equipment lists, summaries of connected and used utilities, operating procedures, piping and instrumentation flow diagrams, raw materials and other consumables needed, finished product quality, yields on feedstocks, range of capacity and any other pertinent data all in sufficient detail to allow a complete technical evaluation of the facility.

Appendix B - Technical Criteria - Section III.
Design Basis, Paragraph C, 1.d.

- d. Blended feed to concentrator.

The AOP-derived nitric acid, the fume nitric acid, and the spent mixed acid shall be fed to the extractive distillation tower, either separately or combined, in suitable proportion to provide the following blended feed composition. The unit design capacity shall be based on this feed blend.

| | |
|-----------------------|---------|
| Nitric Acid (wt) | 42% |
| Sulfuric Acid | 32% |
| Nitrosylsulfuric Acid | 1% |
| Water | 25% |
| Temperature | Ambient |

Appendix C - Method of Evaluation, III.B.

Feedstocks: The technical proposal shall indicate the feed acid consumption of each NAC-SAC unit under the guaranteed design capacity operating conditions. Offeror shall state the feed acid consumption in short tons per ton 100% product nitric acid for both nitric acid and sulfuric acid in the blended design feedstock. Yield losses for each unit shall be assessed by the Government as a normal annual operating cost based on the following acid unit prices:

| | |
|---------------|---|
| Nitric Acid | \$100.00 per short ton (2000 lbs.) 100% HNO ₃ |
| Sulfuric Acid | \$ 30.00 per short ton (2000 lbs.) 100% H ₂ SO ₄ |

While technical personnel of the Corps were of the view that the above-quoted provisions made it clear that the Government was interested in determining the total overall amount of feed acids going into the plant (including nitrosylsulfuric acid), the total overall amount of product and/or by-product acids coming out, and the losses of nitric and sulfuric acid going through, in an attempt to answer questions raised by your firm concerning how the constituents of the feedstock should be entered in the bidding schedule of Step Two, Amendment No. 2 to the IFB was issued on June 5, 1973, which added a new paragraph 5 to Section E of Appendix B of the RFP, which stated:

5. All losses of sulfuric acid and nitric acid shall be stated and guaranteed in Step II.

A complete material balance showing all guaranteed figures of blend feedstock, losses, product and by-product sulfuric and nitric acids must be provided by the successful offeror within 30 days after award of contract. Nitrosylsulfuric acid in the blended feedstock shall be calculated as separate streams of equivalent 100% HNO_3 and 100% H_2SO_4 . These equivalents shall be added to the respective nitric and sulfuric acid feed quantities of the blended feedstock for the purpose of establishing the total amount of each acid entering the NAC-SAC units and for determining the applicable acid recovery yields of the NAC-SAC units.

You submit that there are three issues raised by your protest, namely: 1. Was Chemico responsive? 2. Was Hercules-Jones responsive? 3. If both were responsive, which bidder was low? Since we have concluded that the first two questions must be answered in the affirmative and in the negative, respectively, the third question becomes academic.

1. Is Chemico responsive?

You state that by far the single most important paragraph in the RFP bearing upon this protest is Section II. A., Appendix B at page B-2 of -0013 (which we again quote in pertinent part), showing the following requirement:

*** the offeror must be prepared to demonstrate satisfactorily to the Evaluation Board that any design, equipment, materials or metallurgy he intends to employ has had at least two years' successful operation in a facility of the same general type and service as that proposed in the technical proposal.

Thus you argue:

Two parts of this requirement deserve particular attention. First is the language ". . . must be prepared to demonstrate satisfactorily. . . ." These words establish the fact that while the

act of demonstrating to the Board is discretionary with the Board, the ability to demonstrate is mandatory. The offeror must be prepared to demonstrate two years of successful operation, and unless he can do so he cannot respond to the invitation.

Second, attention is invited to the words ". . . a facility of the same general type and service as that proposed. . . ." These words make it clear that success with various items of the equipment, materials or metallurgy (chemistry) proposed is not enough. To meet this test, an offeror must have put them all together in a facility and operated them successfully in that facility for two years.

Hercules Incorporated has been in the business of operating nitric acid-sulphuric acid concentration plants for over fifty years, and has sufficient business contacts and sources of information in the industry that if Chemico has, in fact, operated a facility of the general type and service it has proposed, Hercules would know of it. No such facility is known to exist. The District Engineer has verbally informed Hercules-Jones that he has satisfied himself that Chemico's proposed design complies with the requirement. Citing the so-called Freedom of Information Act (Pub. Law 89-487; 5 U.S.C. 552), Hercules-Jones has asked the District Engineer for the name and location of the facility but he has refused to do so on the surprising basis that such information is proprietary or confidential.

It is therefore urged that if Chemico did not satisfactorily demonstrate that its design, equipment and materials have had two years' successful operation in a facility similar to that it proposed, our decision in 48 Comp. Gen. 291 (1968) (DeLaval case) is remarkably similar to the instant protest and is dispositive of this issue.

It should be observed, with respect to your contention that you are entitled under 5 U.S.C. 552 to obtain the name and location of facilities built by Chemico, that we have no authority under that act to determine what information must be disclosed by other Government agencies. B-165617, March 16, 1969. Also, it does not appear that you availed yourself of the usual procedures for review or requests to release such information, as provided in 32 CFR 205.1, et seq. In any event, we do

not believe that you have shown that you have been unduly prejudiced in questioning Chemico's qualifications, and it appears that because of your role as operating engineers for existing AAP facilities at Radford and Sunflower, as well as from your own stated independent investigation, you are well aware of Chemico's experience in this area. It is also noted that in those plants cited by the contracting officer as meeting the same general type and service as those proposed by Chemico in its technical proposal, you have detailed at some length the dissimilarities that you believe to exist between the plants in operation as opposed to the ones offered, as well as the alleged unsatisfactory performance at these plants by Chemico.

In direct response to the issue of whether Chemico met the above-cited experience requirements, the administrative report to our Office advised:

Chemico meets these general requirements [experience] in the same sense that Hercules-Jones does, in that neither company has designed and constructed a plant exactly like that outlined in the RFTP. However, it was recognized that both companies possess "in-depth" technological skill and experience, and, in keeping with the "Design Philosophy" expressed on page B-1, Appendix B of the RFTP, both Chemico and Hercules-Jones were considered acceptable for advancement to Step Two.

The design philosophy cited was developed to conform to ASFR 2-501 General, last paragraph. Significant quotes are, "Since facilities incorporating these features to meet the following technical criteria are without precedent in Government plants, two-step formal advertising is the method employed to obtain the best offer from industry. Because the Government wishes to grant all offerors the greatest flexibility in their technical proposal or proposals for furnishing this plant, the criteria included in this Request for Technical Proposal are not intended to be unduly restrictive to the offeror but to be a guide of the minimum standards of engineering design, construction, operation, safety, and maintenance that are acceptable to the Government for this facility."

Both offerors were granted exceptions to the RFTP based on this premise.

* * * * *

Hercules-Jones was told on innumerable occasions that Chemico's proposed design met the general requirements of the RFTP concerning experience in the same way the Hercules-Jones T.P. did. It was told also that the Evaluation Board (Contracting Officer) had proof of satisfactory experience with the Chemico units involved, and that there was no RFTP requirements, law, or regulation that required the Contracting Officer to prove this to the satisfaction of other bidders.

Attached as Tab "D" are vendors' lists from both Chemico and Hercules-Jones. As is evident from the lists, both offerers buy and install technically proven equipment of standard design and manufacture from the same vendors. It is noted that such names as Duriron Company, Pfaudler Company, Hooter, Vulcan, John Zinc, Marley, Fansteel, etc., appear in both lists. RFTP-0013 specifically requires (see 2.b.(2)) . . . ; "manufactured by companies regularly engaged in the manufacture or production of such equipment and material and designed for the purpose intended." This provision was enforced upon Chemico and Hercules-Jones alike. Since there is no RFTP requirement that offerers prove each individual piece of equipment until performance tests - after the plants are mechanically complete - and since both offerers would normally purchase and install equipment and materials from essentially the same vendors, it was determined Chemico was as technologically capable of putting the pieces together as Hercules-Jones. An evaluation of the data sheets concerning equipment and materials indicates that the Chemico Technical Proposal contained all the necessary experience record at Step I.

* * * * *

In accordance with the provisions of ASPR, Part 5, Section II, paragraph 2-503.1, Step One, RFTP-0013 was distributed to qualified sources in accordance with 1-302.2. There has never been any doubt that Hercules-Jones was a qualified source. The Parlin, New Jersey plant is listed in its Technical Proposal. Based on the above, Chemico

B-177220

was also considered a qualified source, and after proper evaluation of its Step I documents, was advanced to Step II.

As we interpret the experience requirements in the instant case, the emphasis is placed upon the offeror's experience in nitric sulfuric acid concentration plant design and construction capability to accomplish the required work to the satisfaction of the Government. The offeror must be prepared to show that the components offered have performed satisfactorily in an operating plant of similar design for two years as that proposed in its technical proposal; and not as you urge, that an offeror must have put them all together in a facility and operated them successfully in that facility for two years.

In the DeLaval case (48 Comp. Gen. 291) the experience requirements were concerned with the reliability of the item offered rather than the capability of the manufacturer and we held that such requirements went to the responsiveness of the bids rather than to bidder responsibility. It appears that the Evaluation Board did not specifically consider whether the experience requirements of the instant procurement went to responsibility or responsiveness. In our view these requirements in the RFP went for the most part to the question of responsibility of the offeror and his overall ability to construct satisfactory plants, rather than to the responsiveness of his bid under the second step, and, to this extent, your arguments concerning the "responsiveness" of Chemico's bid under the second step are misplaced. To the extent that responsiveness is involved, we find no basis for concluding that the Chemico bid did not meet the literal requirements of the second step. Thus DeLaval is not dispositive of this issue.

We do not question an agency's determination of a contractor's qualification in the absence of either clear evidence of bad faith or a convincing showing that no substantial grounds exist for the administrative determination. 45 Comp. Gen. 4, 6 (1965); 37 Comp. Gen. 430, 435 (1957). We do not find that you have presented sufficient persuasive evidence to meet this burden of proof, or to sustain your allegation that "Hercules-Jones meets this requirement [experience]; Chemico does not." Rather, our review of the record, and consideration of the evidence and arguments advanced at the conference attended by all parties in interest, have uncovered no basis upon which we might properly conclude that the agency acted unreasonably or in bad faith in finding Chemico responsible and its bid responsive.

You have also questioned, under your designated issue Number 3, whether the Corps properly analyzed the comparative operating costs in the Evaluation Formula of Step Two, in that you allege Chemico's

B-177220

guaranteed yield of 99.8% (as opposed to your guarantee of 98.5%) has never been attained by Chemico and is "nothing more than a gleam in Chemico's eye." You say the entire price advantage gained by Chemico under the second step is achieved by its stated "old and treatment of liquid waste effluent. We do not accept the premise upon which this argument is based because it seems to be no more than an assertion that Hercules-Jones' operating costs should be accepted as the standard of realism. However, you have presented no persuasive reason why Chemico's costs, which were the lowest overall, are not an equally valid standard of realism. The administrative report, in answer to this contention, observes:

Catalytic, Inc., the MDO consultant for these projects, has completely evaluated Chemico Bid Items #1 and #2 from both technological and accuracy of quotations standpoints. The consultant states that technically Chemico can probably do what they have guaranteed in the quotations, and that the guaranteed feed acid requirements of Chemico are accurate to within negligible limits of error.

* * * * *

In discussing these items, Hercules, Inc. states briefly their inability to ascertain what Chemico is offering that Hercules, Inc. is not offering. No doubt it is difficult for Hercules, Inc. to verify the extremely small effluents quoted by Chemico, based on what the Hercules, Inc. staff believes Chemico to be offering. The extremely small guaranteed liquid effluent streams were the subject of a study of Chemico's Technical Proposal and amendments, aside from the Hercules protest. It was undertaken to assure this office that Chemico was indeed bidding their Technical Proposals. The consultant states, and it has been verified by this office: "Chemico's T.P., revised and admissible, stated that Chemico was adding capital equipment which function specifically was to reduce or eliminate liquid waste effluent." The purpose of including Item #9 Radford, #10, Badger and #11 Sunflower in the Bid Evaluation Formula was to force Designer-Constructors to bid plants with the least possible liquid effluents, or have high

annual operating charges for these items assessed against them. Rather than go the route of higher operating assessments, Chemico chose to add additional equipment "inside" their plants; hence their low liquid effluent quotations. Chemico bid their Technical Proposals in this respect.

2. Is Hercules-Jones responsive?

As stated earlier, it was determined by the Corps that Hercules-Jones did not bid its technical proposal when it did not include the nitric and sulfuric acid equivalents in the nitrosylsulfuric acid when establishing the total amount of each acid entering the NAC-SAC units.

While admitting that you misstated the yield on sulfuric acid in the Evaluation Formula, you argue:

At the outset, it should be emphasized that Hercules-Jones did not understate the HNO_3 feed acid or the net consumption of H_2SO_4 in its technical proposal, which necessarily is included as a part of the bid. The District Engineer does not disagree with that assertion. In making the allegation of nonresponsiveness by virtue of understatement of nitric acid feedstock and net consumption of sulphuric acid, the District Engineer is referring to the calculations made by Hercules-Jones in completing the Evaluation Formula. Principally, the confusion arose in the lines calling for "Nitric Acid in blended Feedstock Short Tons/Yr. 100% HNO_3 x \$100.00/Short Ton 100% HNO_3 " and "Sulphuric Acid in blended Feedstock Short Tons/Yr. 100% H_2SO_4 x \$30.00/Short Ton 100% H_2SO_4 ;" more particularly, attention is invited to the terms "100% HNO_3 " and "100% H_2SO_4 " in those lines. The Hercules chemical engineers interpreted these terms literally and entered the amount of HNO_3 and H_2SO_4 in the feedstock. They did not include the equivalent amount of these acids which is contained in the nitrosylsulfuric acid (HNO SO_4) which constitutes 1% of the feedstock. It is submitted that this is the response most chemical engineers would give when asked

to enter the amount of "100% HNO_3 " and "100% H_2SO_4 " rather than the amount of "Equivalent HNO_3 " and "Equivalent H_2SO_4 ." Not to be ignored is the fact that while the Evaluation Formula for all three bids was to be completed in the same way, the three solicitations described how to account for the nitrosylsulphuric acid in three different ways. Hercules-Jones asked for an interpretation before the due date for bids and was told in effect "Its all there. Do it the way it reads."

However, be that as it may, the real point to be made is that the completion of the Evaluation Formula was a mathematical exercise whose only real purpose was to assist the District Engineer in determining the lower bidder. When he checked the Hercules-Jones calculations and concluded that we had understated the HNO_3 feed acid and net consumption of H_2SO_4 , he found all the information he needed in the Hercules-Jones total technical proposal and bid. He made his own calculations from what he found there (and incidentally also made some errors in applying the figures to his own requirements). The mistake made by Hercules-Jones was analogous to a mathematical error in extending a unit price to get the total price, and it is well-established that such a mistake does not per se render a bid nonresponsive.

In determining responsiveness, your office has said many times that "any deviation from the requirements of the invitation which affects the price, quantity or quality of the materials to be furnished are material deviations and render the bid nonresponsive." 44 Comp. Gen. 461, 463, citing 30 Comp. Gen. 179. The Hercules-Jones deviation, if such it was, did not affect price, quantity or quality but only one manner of calculating comparative operating costs using price, quantity and quality data in the bid itself.

While many technical arguments have been made to support the views of both parties in deciding this issue, the simple fact exists that Hercules-Jones is not disputing Catalytic's calculations but the basis for the calculations. The apparent discrepancy arises from the fact that Hercules-Jones has and continues to ignore the nitrosylsulphuric equivalents in the feed stock, and that your bid indicated a yield of

B-177220

102.5 percent for By-Product Sulfuric Acid Export (a credit); yet your technical proposal lists a conversion efficiency for sulfuric acid feed at 99.41 percent, for an understated net consumption (a charge) of H_2SO_4 by 2,142.3 tons/year. Likewise, the annual production of nitric acid feed stock quantity in your bid calculates out to 99.66 percent, whereas your technical proposal indicates a yield of 98.5 percent for an understated HNO_3 feed by 1,081 tons/year.

These mistaken entries clearly affect the evaluated prices under the second step and could not be waived as a minor informality. In any event, Catalytic (treating your bid as responsive) reconstructed your bid by using the conversion efficiency for sulfuric acid feed of 99.41 percent as stated in your technical proposal in lieu of the 102.5 percent as bid, and on this basis your firm would not have been the low bidder on the net adjusted bid.

For the foregoing reasons, your protest is denied.

Sincerely yours,

Paul U. Dembling

For the Comptroller General
of the United States

BEST DOCUMENT AVAILABLE