NAS1-20001

SELECTION STATEMENT

SELECTION OF CONTRACTOR
FOR
ENGINEERING DESIGN, DEVELOPMENT AND TESTING
OF
FACILITY AUTOMATION SYSTEMS

On March 25, 1993, I met with the Source Evaluation Committee (SEC) that was appointed to evaluate proposals for the Development and Installation of Research Facility Automation Systems. The SEC presented the procurement history, the evaluation procedures and the results of the evaluation of the proposals submitted.

PROCUREMENT DESCRIPTION

The procurement is for the total life cycle development of research facility automation systems. The exact work to be performed will be set forth in individual task assignments based upon the needs of the various research and CoF projects at Langley Research Center.

The Contractor will be required to perform engineering analysis and design, simulation, fabrication, software generation and validation, and installation/checkout of research facility automation systems. Most automation systems will require real time embedded programmable devices including distributed architectures. These systems will automate and control wind tunnel/test cell processes, subsystems, and operations.

The Contractor will be required to furnish a level of effort of up to 80,000 hours during the three year performance. no options are included. Government autorized task assignments will be issued requiring a cumulative minimum of 1,000 direct productive labor hours over the life of the contract. The procurement is a cost plus fixed fee type and will be incrementally funded.

OFFERORS

Fifty eight (58) firms were provided the request for proposal. Fifteen (15) firms attended the pre-proposal conference.

The following firms submitted proposals by the specified time and date of 4:00 PM local time, October 5, 1992:

Calspan Corporation
Diversified Engineering
FluidDyne Engineering, Inc.
H-R International (Patently Unacceptable)
Phoenix Control Systems
PRC, Inc.
Sverdrup Technology, Inc.
Tetra Tech
Wyle Laboratories

EVALUATION PROCEDURE

A Source Evaluation Committee was appointed to conduct the evaluation of proposals received in response to this solicitation. Prior to the release of the Request for Proposal (RFP), a detailed Evaluation Plan was developed by the Evaluation Committee and approved by the Selection Official. The RFP contained a representative task which gave the offerors greater visibility into the development areas that may be assigned in the course of the contract and to allow NASA to use the responses for evaluation purposes.

The evaluation plan included a numerical and adjective scoring system for the Mission Suitability subfactors. The plan also stipulated that the SEC would evaluate, but not score, Cost, Relevant Experience/Past Performance and Other Considerations. Further, the plan provided for the assignment of an adjective rating to the latter two (2) factors.

The evaluation factors/subfactors and the relative importance of each as set forth in the evaluation plan/RFP are summarized below:

Factor 1 MISSION SUITABILITY

	Subfactor 1 - Understanding the Requirements and Approach	50%
	Subfactor 2 - Resources	35%
	Subfactor 3 - Management	15%
Factor 2	COST	
Factor 3	RELEVANT EXPERIENCE AND PAST PERFORMANCE	
Factor 4	OTHER CONSIDERATIONS	
	Subfactor 1 - Financial Condition and Capability	
	Subfactor 2 - Contract Terms and Conditions	
	Subfactor 3 - Small Business and Small Disadvantaged Business Subcontracting Plan	

While the numerical weights reflected the relative importance of the subfactors under Mission Suitability, they were to be used only as a guide by the Source Selection Official. The RFP/Evaluation Plan indicated that in the selection of the Contractor for negotiation leading to contract award, Missions Suitability, Cost and Relevant Experience and Past Performance will be of essentially equal importance. Other Considerations will be of less importance than each of the other three factors.

The SEC evaluated the proposals in accordance with the approved Evaluation Plan. Initially, all voting members reviewed each Mission Suitability proposal in alphabetical order and the Contract Specialist reviewed each Business proposal in alphabetical order in sufficient depth to identify any proposal(s) which were patently unacceptable. One of the nine proposals, H-R International, Inc. was considered to be patently unacceptable. H-R International, Inc. was notified on November 10, 1992, that its proposal was unacceptable and that it did not address itself to the essential requirements of the RFP nor did it clearly demonstrate an understanding of the RFP Requirements. In addition, H-R International proposed the second highest cost of all the offerors.

The SEC, with the concurrence of the Contracting Officer, elected to proceed with the Standard Evaluation Procedure, as set forth in the plan. In alphabetical order, each Voting Member evaluated in detail the technical proposals and individually developed strengths and weakness and questions

for the three Mission Suitability Subfactors. In addition, consultants were used to evaluate certain designated subfactors. The Voting Members held discussions to arrive at a consensus set of strong and weak points for each of the Mission Suitability subfactors and then assigned a consensus adjective rating to each. These adjective ratings were then converted to consensus numerical scores and weighted in accordance with the RFP and Evaluation Plan.

The SEC members reviewed each business proposal to evaluate the factors of Cost, Relevant Experience and Past Performance, and Other Considerations. Proposed Costs were reviewed and discussed with the SEC's Cost and Pricing Analyst. In addition, the business proposals were reviewed to determine any impact on the Committee's Mission Suitability evaluation. Preliminary probable costs were developed for each firm. The Contract Specialist, with input from the Voting membership, assigned adjective ratings to Factor 3 -Relevant Experience and Past Performance and Factor 4 - Other Considerations.

At the completion of the above phase, the Chairperson presented the Initial Evaluation to the Contracting Officer in both oral and written reports. The documentation included a comparison of all offerors' strong and weak points. Major strengths and weaknesses were distinguished. The SEC evaluated the potential for improving the competitive positions of the Offerors by written discussions. Areas to be discussed and questions to be asked were documented and presented to the Contracting Officer.

Based upon the above noted presentation, the SEC and the Contracting Officer determined the Competitive Range; namely, those proposals which had a reasonable chance of being selected for final award. The four (4) firms in the competitive range were:

Calspan Corporation
Fluidyne Engineering, Inc.
Sverdrup Technology, Inc
Wyle Laboratories

The unsuccessful offerors were informed in writing that their proposals were no longer being considered for contract award.

The SEC, in conjunction with the Contracting Officer, conducted written discussions with those firms in the Competitive Range. Best and Final offers were required by

those offerors on the common cutoff date of February 25, 1993.

The SEC completed its consensus evaluation of the "Best and Final Offers," which involved scoring and adjective rating of the Mission Suitability factor, and adjective ratings of the Relevant Experience and Past Performance factor and Other Considerations factor. Probable costs were determined by the Cost/Price Analyst with input from the SEC.

EVALUATION RESULTS

Proposals Not in Competitive Range

Diversified Engineering, Incorporated - The Diversified Engineering, Inc.'s proposal rated at the lower end of the "Good" range under the Mission Suitability Factor. The proposal was one of the lowest cost proposals received. The Relevant Experience and Past Performance Factor was rated as "Good-". Under the Other Considerations Factor, the proposal was considered to be "Fair".

Phoenix Controls, Inc. - The Phoenix Controls' proposal received a rating at the low end of the "Poor" range under the Mission Suitability Factor. The proposal was one of the highest cost proposals received. Relevant Experience and Past Performance Factor was rated as "Poor". Under the Other Considerations Factor, the proposal was considered to be "Very Good".

PRC, Inc. - The PRC proposal was rated in the middle range of "Good" under the Mission Suitability Factor. The proposal was one of the lowest cost proposals received. The Relevant Experience and Past Performance Factor was rated as "Good". Under the Other Considerations Factor, the proposal was considered to be "Very Good".

Tetra Tech, Inc. - The Tetra Tech's proposal received a rating at the low end of the "Poor" range under the Mission Suitability Factor. The proposal was one of the highest cost proposals received. The Relevant Experience and Past Performance Factor was rated as "Poor". Under the Other Considerations Factor, the proposal was considered to be "Good".

Proposals in the Competitive Range

Mission Suitability

Calspan Corporation

The proposal submitted by Calspan received a rating of "Good" for the Mission Suitability Factor. The numerical score was the lowest of the four proposers in the competitive range. However, the numerical score was higher than those with the same adjective rating not chosen for the competitive range. There were adjustments of numerical scores for two of the subfactors as a result of information provided as a part of written discussions, but there was no change in the adjective rating between the initial and final evaluation. The total numerical score increased slightly.

The Calspan proposal contained several strengths the include comprehensive approaches to electronic fabrication and interconnectivity, systems installation and checkout, system validation (representative task only), and comprehensive systems engineering approach to design; extensive knowledge of aeronautical test facility automation design; and, complete methodology to system validation.

The Calspan proposal did contain several weaknesses. Under the Understanding the Requirement and Technical Approach subfactor, the approach to integration of specific software modules with real-time systems lacked details. The software implementation plan was inadequate. In response to the representative task, the proposal did not identify real-time simulation and the design staffing was inadequate. Under the Management subfactor the management plan did not adequately address subcontract management and the commitment of resources was not detailed.

Fluidyne Engineering, Inc.

The proposal submitted by Fluidyne received a rating of "Excellent" for the Mission Suitability Factor. The numerical score was the highest of all proposers in both the initial and final evaluations. There was an upward adjustment in the numerical scores for two of the subfactors as a result of information provided in written discussions. No change was made to the adjective rating.

The Fluidyne proposal contained a number of strengths, some of which are mentioned below, that resulted in the proposal

receiving the highest score for each of the subfactors. Several strong points under the Understanding the Requirements and Technical Approach subfactor were noted for comprehensive approaches to: electronic fabrication and interconnectivity, software engineering, system validation and a comprehensive system engineering approach to design. It was also noted for extensive knowledge of aeronautical test facility automation design. In the response to the representative task, it was noted for its comprehensive simulation and system validation approaches, and comprehensive electronic fabrication approach/plans and quality assurance. Under the Resources subfactor, the proposal received strengths for its extensive capabilities in the areas of engineering, lab/testing, wind tunnel automation and expertise in all required resource areas. Under the Management subfactor, strengths were given for its comprehensive, proven management approach and start-up/phase-in plan.

Sverdrup Technology, Inc.

The proposal submitted by Sverdrup received a rating of "Very Good" for the Mission Suitability Factor. The numerical score was the second lowest of the four proposers in the competitive range. There were adjustments of numerical scores for two of the subfactors as a result of information provided as a part of written discussions. However, there was no change in the adjective rating between the initial and final evaluation while the total numerical score increased slightly.

The Sverdrup proposal contained several strengths, some of which are mentioned below. Under the Understanding the Requirements and Technical Approach Subfactor, strong points were given for a comprehensive systems engineering approach to design and a comprehensive approach to software engineering. Strengths were also given for extensive knowledge of aeronautical test facility automation design. Under the Resources subfactor, strengths were given for extensive lab/testing capabilities and expertise in all required resource areas. A strength was also given for a comprehensive, proven management approach under the Management subfactor.

The Sverdrup proposal did contain a weakness under the Understanding the Requirements and Technical Approach subfactor in that methodologies to accomplish hardware design

lacked specificity in the response to the respresentative task.

Wyle Laboratories

The proposal submitted by Wyle received a rating of "Very Good" for the Mission Suitability Factor. Wyle's numerical score was the second highest of all proposers in both the initial and final evaluations. There was an adjustment in the numerical score for one of the subfactors as a result of information provided as part of the written discussions. However, there was no change in the adjective rating between the initial and final evaluation while the total numerical score increased slightly.

The Wyle proposal contained a number of strengths, some of which are mentioned below, that resulted in the Wyle proposal receiving the second highest score for two of the subfactors. Strengths were given under the Understanding the Requirements and Technical Approach subfactor for comprehensive approaches to: electronic fabrication and interconnectivity, software engineering, system validation and systems installation and checkout. Also, strengths were given for a comprehensive systems engineering approach to design and extensive knowledge of aeronautical test facility automation design. In the response to the representative tasks, strengths were given for comprehensive approaches to simulation, software generation, system validation (includes real-time hardware control) and a comprehensive electronic fabrication approach, plans and quality assurance. Under the Resources subfactor, strengths were given for extensive engineering and lab/testing capabilities and expertise in all required resource areas.

Costs

The SEC evaluated the realism of proposed costs and the consistency of such proposed costs with other aspects of the proposal. Adjustments were made to the proposed costs submitted by all four proposers in the competitive range in order to determine the probable cost to the Government of each of the proposals.

Calspan proposed the lowest cost of the offerors in the competitive range. The cost proposed by Fluidyne was somewhat higher than Calspan, with Sverdrup Technology higher

than Fluidyne and Wyle Laboratories proposing the highest cost of the four offerors in the competitive range. After evaluation of the cost proposed by Calspan and Fluidyne, the SEC determined that the cost proposed warranted a small upward adjustment. A downward adjustment was made to both Sverdrup Technology and Wyle Laboratories. In evaluating the Wyle proposal, the SEC found that the probable cost to the Government was less than the Sverdrup Technology probable cost. The difference in probable cost from lowest to highest was approximately 24 percent.

Relevant Experience and Past Performance

Fluidyne received an "Excellent" rating under the Relevant Experience and Past Performance factor. Calspan, Sverdrup Technology and Wyle Laboratories all received a "Very Good" under this factor. Fluidyne's proposal reflected extensive experience in providing turn key tunnel control systems throughout the world. Its efforts encompassed all aspects of the solicitation requirements. References confirmed high quality performance. Calspan proposal reflected extensive experience in engineering support of operational test facilities. Related experience was primarily associated with maintenance and upgrades of existing facility control systems. Very good comments were offered from references. Sverdrup has extensive experience in design of control systems for aeronautical testing facilities. Experience in other aspects of the solicitation requirements is less extensive. Favorable comments were provided by references. Wyle Laboratories proposal reflected experience in aeronautical test facilities. Fair to excellent ratings were provided by the references.

Other Considerations

Calspan, Sverdrup Technology and Wyle Laboratories all received a rating of "Very Good" under the Other Considerations factor. Fluidyne received a rating of "Good". All offerors, including major subcontractors, were determined by the SEC to have adequate financial resources to perform the contract or the ability to obtain them. Further, all offerors were determined to have a sound financial position. None of the offerors took exception to the Government's terms and conditions. Calspan, Sverdrup Technology and Wyle Laboratories submitted Small Business and Small Disadvantaged Business Subcontracting Plans. All plans were in compliance

with NASA policy to afford maximum practicable opportunity for small and small disadvantaged business concerns to participate in Government contracts. Fluidyne was not required to submit a plan since it is a small business concern.

SELECTION DECISION

I reviewed and assessed the Mission Suitability evaluation and noted that Fluidyne Engineering, Inc. had submitted a proposal superior to those submitted by the other three firms in the competitive range. It was recognized that the differences were significant and that the differences were accurately reflected in the scores. The percentage difference in the Mission Suitability scoring from low to high was approximately 30 percent.

I then reviewed the SEC's assessment of Relevant Experience and Past Performance and noted that Fluidyne Engineering, Inc. had received the highest rating of those in the competitive range. The Other Considerations factors evaluation indicated that Calspan, Sverdrup Technology and Wyle Laboratories received equal ratings. However, it is noted that the lower rating given to Fluidyne under Other Considerations factor was given due to the Financial Condition and Capability subfactor in which Fluidyne strength was somewhat less than the other firms. The firms were considered equal in regard to the other subfactors.

Finally, I analyzed the comparative position of the four proposals in the competitive range from the standpoint of costs based on the SEC's probable cost assessment. I noted that Fluidyne's probable cost was the second lowest of those in the competitive range.

I have concluded that the Source Evaluation Committee performed its duties in accordance with procedures similar to those prescribed in NHB 5103.6B, "Source Evaluation Board Handbook," and in strict compliance with the Engineering, Design, Development, Installation, and Testing of Facility Automation Systems Evaluation Plan, using the Standard Approach.

Based on its superior mission suitability proposal accompanied by the highest rating for Experience and Past Performance and the second lowest probable costs, Fluidyne Engineering, Inc. is selected for the purpose of final

negotiations leading to award of the Engineering Design, Development, Installation, and Testing of Facility Automation Systems Contract.

William R. Kivett
Procurement Officer

April 15, 1993
Date