SELECTION STATEMENT

SELECTION OF CONTRACTORS FOR RELIANCE CONSOLIDATED MODELS (RECOM); DESIGN AND/OR FABRICATION OF AEROSPACE MODEL SYSTEMS AND DEVELOPMENTAL TEST HARDWARE

On November 13, 1996, I met with the Source Evaluation Board (SEB) that was appointed to evaluate proposals for RECOM; Design and/or Fabrication of Aerospace Model Systems and Developmental Test Hardware. The SEB presented the procurement history, the evaluation procedures and the results of the evaluation of the proposals submitted.

PROCUREMENT DESCRIPTION

The procurement provides for the design and/or fabrication of aerospace model systems and developmental test hardware used for spaceflight, flight and ground-based tests. The precision experimental research models and hardware may consist of both mechanical and electrical/electronic hardware elements. The mechanical hardware elements include but are not limited to wind tunnel models (including force/pressure, propulsion simulation, dynamically scaled, free flight, and drop models, model components, model support systems, test equipment, aircraft flight test hardware, space flight hardware, and instrumentation/devices to measure force, moments, acceleration, attitude, pressure and temperature. The electrical/electronic hardware elements include but are not limited to, motors, actuators, sensors, control panels, printed circuit boards, data acquisition and control systems, circuit protection, connectors and wiring as required to support the test hardware. The research models and hardware may be utilized for various NASA facilities such as wind tunnels, aircraft, and other existing and future laboratory environments.

The procurement was set aside for small business with an 8% small disadvantaged business participation goal. The request for proposal provided for the expectation that multiple indefinite delivery contracts (indefinite quantity type) would be awarded pursuant to the Federal Acquisition Streamlining Act (10 U.S.C. 2304 (a)). Each contract will provide for a minimum of $200,000, and a maximum of $90,000,000 for the 5-year contract period of performance. Delivery orders will be placed under the contracts. Langley Research Center will administer the contract at the contract level. Ames, Langley and Lewis Research Centers will each have Administrative Contracting Officers to issue and administer their individual delivery orders. Orders will be placed either on a fixed-price basis or cost reimbursable basis.

SOURCES

A Sources Sought Synopsis was issued in the Commerce Business Daily on March 29, 1996 as well as on the Internet. Twenty-three responses were received. Based upon the findings of a panel comprised of NASA technical experts appointed by the SEB Chairman, which reviewed the responses, it was determined that the procurement would be issued as a small business set aside with an 8% disadvantaged business participation goal.

On June 10, 1996, a notice was issued in the Commerce Business Daily as well as on the Internet that a draft solicitation would be available June 14, 1996 for public comment. The draft solicitation could be downloaded from procurement homepages of Ames, Langley, or Lewis Research Centers.

On July 10, 1996, the public was informed, via the Commerce Business Daily and the Internet, that the final solicitation document would be available August 1, 1996, and could be downloaded from the Ames, Langley or Lewis Research Center homepages. Identical offeror libraries were established to provide firms access to the RECOM documents. The libraries were located at Ames, Langley and Lewis Research Centers. Specific individuals were assigned to assist those firms wishing to visit the libraries. A preproposal conference was held at Langley Research Center on August 28, 1996.

The following firms submitted proposals by the specified time and date of 4:00 PM local time, September 23, 1996.

Advanced Technologies, Incorporated
Dynamic Engineering, Incorporated
Micro Craft, Incorporated
Starwin Industries, Incorporated
USM, Incorporated

EVALUATION PROCEDURE

Langley Research Center's Director appointed an SEB, with membership drawn from each of the three participating Centers, to conduct an evaluation of proposals received in response to the solicitation. Prior to the receipt of proposals, a detailed Evaluation Plan was developed by the SEB and approved by the Source Selection Official.

The Evaluation Plan included a numerical and adjectival scoring system for the Mission Suitability subfactors. The plan also stipulated that the SEB would perform an analysis of the proposed Cost/Price to determine its realism and the extent to which it reflected performance addressed in the technical proposal. Further, "Relevant Experience and Past Performance" would be assessed to determine the extent to which contract objectives (including

technical, management, schedule, subcontracting goals and cost) have been achieved on related efforts by the offeror and any teaming partners and/or significant subcontractors. The Evaluation Plan provided for an assignment of an adjective rating to "Relevant Experience and Past Performance".

The Mission Suitability subfactors and their weights, as set forth in the Evaluation Plan and solicitation, are summarized below:

	Weight
Subfactor 1 - Understanding the Requirement and Approach	500
Subfactor 2 - Adequacy of Resources	300
Subfactor 3 - Management and Operations	200
	1000

The solicitation and Evaluation Plan indicated that in the selection of the Contractor(s) for contract award, "Mission Suitability", and "Relevant Experience and Past Performance" would be of essentially equal importance. "Cost/Price" would be of less importance than each of the other two factors.

The SEB evaluated the proposals in accordance with the approved Evaluation Plan. Initially, all Voting Members reviewed each Technical Proposal (Volume 1) and the Contract Specialist reviewed each Business Proposal (Volume II) in sufficient depth to identity any proposal(s) which were patently unacceptable. One of the five proposals, USM, Incorporated, was deemed to be patently unacceptable in that it did not address itself to the essential requirements of the solicitation, nor did it clearly demonstrate understanding of the solicitation requirements. USM, Incorporated was notified and eliminated from further evaluation.

Each Voting Member reviewed in-depth and in alphabetical order each remaining Technical Proposal, documenting strong/weak points and questions for each subfactor. NASA consultants, appointed by the SEB Chairman, reviewed designated areas and also documented strong and weak point and questions. A consensus of the strong and weak points and categorization as "major" or "minor" strengths or weaknesses was developed by the Voting Members. Weak points were classified as either "uncertainties" (ambiguities and omissions) or "deficiencies". Upon completion of the consensus evaluation, the Contracting Officer's designee reviewed the technical documented findings.

A Cost/Price analysis was conducted to help determine the offeror's understanding of the requirements, as well as the validity of the offeror's approach to performing the work in accordance with the solicitation requirements. The proposals were evaluated for cost reasonableness and

realism and a probable total price was developed. The analysis of the Cost/Price did not impact the technical findings.

The "Relevant Experience and Past Performance" Factor was assessed using the information collected from the Relevant Experience and Past Performance Forms submitted by the offeror's customers. The voting members assigned consensus adjective ratings to "Relevant Experience and Past Performance".

At the completion of the analysis of all of the acceptable proposals, the SEB Chairperson presented the evaluation findings to the Contracting Officer in both oral and written reports. The Contracting Officer recommended award without discussions in accordance with FAR Clause 52.215-16, "Contract Award - Alternate II".

A copy of the final report was submitted to me, the Source Selection Official, and the Chairperson made an oral presentation which outlined the SEB's findings. After presentation of the final report, I selected the offerors for award of contracts without discussions.

EVALUATION RESULTS

Mission Suitability

Set forth below is a summary of the SEB's findings with regard to the four (4) acceptable proposals in descending order of Mission Suitability ranking, beginning with the highest ranked offer.

Micro Craft, Inc. (MCI)

The proposal submitted by MCI received an overall Mission Suitability rating of "Excellent".

The SEB identified twenty-one major strengths in the evaluation of MCI's understanding of pertinent design and fabrication requirements and approach for executing the work. Major strengths were noted for: full CAD capabilities; demonstrated understanding and capabilities in design and analysis aspects of RECOM; demonstrated excellent capabilities in force balance technology; comprehensive understanding of design and analysis processes; extensive analytical capability; demonstrated thorough understanding of isolation methods and application; and extensive involvement in the advancement of model technologies. The SEB also found major strengths in the areas of: pressure strain and thermal instrumentation for ambient and hostile environments; fabrication, calibration, installation and trouble shooting force balances; multiple rapid prototyping technologies; large scale models fabrication; procedures for achieving precision contours and surface finishes;

and demonstrated fabrication capabilities covering the gamut of RECOM. MCI was also assigned major strengths for excellent capabilities and expertise in force balance calibrations and in calibration of dynamically scaled models.

MCI was assigned major strengths for the proposed workforce; good facility resources; and excellent computer hardware/software and manufacturing equipment. A major strength was given for MCI's well-defined lines of authority within the team and Government interfaces. Also, a major strength was assigned for MCI's organizational structure and processes.

The SEB found no major weaknesses under the Mission Suitability factor for MCI.

Dynamic Engineering, Inc. (DEI)

The proposal submitted by DEI received an overall Mission Suitability rating of Excellent.

The SEB identified eighteen major strengths in the evaluation of DEI's understanding of pertinent design, fabrication, and quality assurance requirements and approach for executing the work. Major strengths were assigned for: extensive analytical capabilities; excellent capability and expertise in force balance design; strong design and analysis capabilities and experience in most RECOM areas; strong CAD/ECAD capability and expertise; and demonstrated capability in design and integration of electronic sub-systems and software into mechanical test hardware. Major strengths were also assigned for: fabrication expertise covering the gamut of RECOM; excellent capability in fabrication of composite models and rotor blades; excellent procedures for achieving precision contours and surface finishes; extensive capability in fabrication, installation and calibration of wind tunnel model instrumentation and force balances and also, trouble shooting force balances. A major strength was assigned for quality assurance in that DEI had certified NDE/NDT inspectors. Other major strengths were identified for excellent capability in calibration of dynamic scaled models, pressure and temperature instrumentation, and strain gages.

A major strength was assigned to DEI for the proposed workforce. Major strengths were identified for excellent computer hardware/software and manufacturing equipment, and for good facility resources. A major strength was assigned for DEI's well-defined lines of authority within the team and Government interfaces. Also, a major strength was assigned for DEI's organizational structure and procedures.

One major weakness was identified because there was no information on design capability in space flight hardware.

Advanced Technology, Inc. (ATI)

The proposal submitted by ATI received an overall Mission Suitability rating of "Very Good".

The SEB identified twelve major strengths in the evaluation of ATI's understanding of pertinent design and fabrication requirements and approach for executing the work. Major strengths were identified for: broad analysis capabilities in structural, dynamic, thermal and fluid mechanics; design and analysis of dynamically scaled systems; several innovative approaches to design and analysis; and demonstrated understanding and expertise in all aspects of RECOM. Major strengths were also assigned for: extensive capability in fabrication, installation and calibration of wind tunnel model instrumentation; excellent procedures for achieving precision contours and surface finishes; and the capability of manufacturing flight and spaceflight hardware. A major strength was assigned for exceptional capability in calibration of dynamically scaled models.

ATI was assigned major strengths for: the proposed workforce; excellent computer hardware/software and manufacturing equipment; and good facility resources. A major strength was also assigned for ATI's well-defined lines of authority within the team and Government interfaces.

The SEB identified one major weakness. The lofting and fairing discussion provided inadequate information.

Starwin Industries, Inc. (SII)

The proposal submitted by SII received an overall Mission Suitability rating of "Fair".

The SEB identified two major strengths in the evaluation of SII's understanding of pertinent design and quality assurance requirements. Major strengths were identified for comprehensive understanding of design and analysis of high temperature engines and for being ISO 9001 registered.

The SEB identified numerous major weaknesses in SII's proposal. Major weaknesses were assigned for inadequate information regarding the design and analysis of aerospace models; metal fabrication; special processes and material processing; fabrication, installation and calibration of instrumentation; and the manufacture of composite aerospace models and rotor blades. Major weaknesses were also assigned for inadequate information in the areas of strain gages, research instrumentation, calibration of dynamically scaled models, pressurized systems and dynamically balanced rotating hardware,

and functional checkout of integrated hardware and software systems. Major weakness were also identified for limited facility resources and for inadequate procedures for ensuring effective and efficient coordination with the Government.

Cost/Price

The SEB performed an analysis of the proposed Cost/Price to determine its realism and the extent to which it reflected performance addressed in the technical proposal. If the proposed Cost/Price analysis was determined to be unrealistic, a probable cost adjustment was made by the Government and was considered in the selection decision. For proposal purposes only, the offeror was required to assume 50,000 direct labor hours and $100,000 of wholesale materials would be required annually from each offeror awarded a contract. The five-year proposed cost were based on this information. The estimated proposed Cost/Price were for proposal and selection purposes only.

The ranking (low to high) for proposed total price, as well as probable total price,
is as follows:

DEI (low)
ATI
MCI
SII (high)

The probable Cost/Price analysis indicated that there was no change in proposed and probable total price for DEI, ATI and MCI. SII's probable total Cost/Price reflected a downward adjustment based upon the Defense Contract Audit Agency's recommendations.

Relevant Experience and Past Performance

"Relevant Experience and Past Performance" was assessed to determine the extent to which contract objectives (including technical, management, schedule, subcontracting goals and cost) have been achieved on related efforts by the offeror and any teaming partners and/or significant subcontractors. "Experience" was viewed as the demonstrated accomplishment of work which is comparable and relevant to the objectives of this procurement.

The SEB assigned an adjective rating as defined in the solicitation and Evaluation Plan for "Relevant Experience and Past Performance" for each of the four offerors.

DEI

DEI received an "Excellent" rating for this factor. The DEI team has provided support to NASA/DOD/Industry for the past 24 years in design and fabrication of wind tunnel models, related aerospace components and force measurement devices. DEI has performed relevant representative tasks valued up to $29 million. DEI has significant directly relevant experience and a very good to excellent past performance record.

ATI

ATI received a "Very Good" rating for this factor. The ATI team has 35 years experience in aerospace model design and fabrication. It has performed relevant representative tasks valued up to $40 million. The ATI team has significant directly relevant experience and a very good past performance record.

MCI

MCI received a "Very Good" rating for this factor. MCI has provided support to NASA/DOD/Industry for the past 27 years in design, analysis, manufacturing, instrumentation of aerospace prototype models and flight hardware. It has performed relevant representative tasks valued up to $37 million. MCI has significant directly relevant experience and a very good past performance record.

SII

SII received a "Good" rating for this factor. SII team members possess relevant experience in mechanical and electrical design, engineering, analysis and fabrication of precision aeronautics and space components. SII has performed relevant representative tasks valued up to $2.1 million. While SII has a very good past performance record, their experience is limited with regard to wind tunnel models and balances.

SELECTION DECISION

After the SEB presentation, I reviewed and assessed the evaluation findings of the SEB, taking into consideration that multiple awards could be made under the solicitation.

I reviewed and assessed the "Mission Suitability" evaluation and noted that ATI, DEI and MCI submitted proposals superior to those submitted by SII.

I then noted the comparative position of the proposals from the standpoint of Cost/Price based on the SEB's assessment. I noted that DEI's proposed

Cost/Price was the lowest, ATI's proposed and probable Cost/Price was the second lowest and MCI's proposed and probable Cost/Price was the third lowest. SII's proposed and probable Cost/Price was the highest.

Finally, I noted the comparative positions of the proposals from the standpoint of "Relevant Experience and Past Performance". I noted that DEI received the highest adjective rating, ATI and MCI tied with the next highest and SII received the lowest comparative adjective rating.

Based upon their "Excellent" and "Very Good" technical proposals, reasonable Cost/Price, and "Excellent" and "Very Good" Relevant Experience and Past Performance, Advanced Technologies, Inc., Dynamic Engineering, Inc., and Micro Craft, Inc., are selected for contract awards.

I have concluded that the SEB performed its duties in accordance with the approved Evaluation Plan and procedures set forth in Section M of the solicitation. I further conclude that the SEB's evaluation was comprehensive, objective, and fair.

Kristin A. Hessenius
Source Selection Official