

Source Selection Decision
Inflatable Aerodynamic Decelerator (IAD)
RFP: NNL11ZB1005R

On July 29, 2011, the final evaluation findings were presented to me by the NASA Source Evaluation Team (SET) appointed to evaluate proposals for the Inflatable Aerodynamic Decelerator (IAD) procurement.

Background

The IAD multiple award contracts will support technology development of inflatable/deployable aerodynamic decelerators being developed to achieve improved atmospheric entry capabilities, which can enable high-mass robotic and human exploration missions. The contract work will include design, analysis, fabrication, and testing of IAD systems, including Thermal Protection Systems (TPS) and inflatable structures, for space vehicle aerocapture, entry, decent and landing in hypersonic, supersonic, transonic and subsonic regimes.

Market research was conducted using a Sources Sought Synopsis released via the NASA Acquisition Internet Service (NAIS) and FedBizOpps websites. There were eleven respondents to the Sources Sought synopsis. A pre-proposal teleconference was also held with industry on May 5, 2011 with numerous companies participating.

The IAD procurement was solicited with the intent to award multiple contracts with selection based upon the evaluation criteria established in the solicitation and in accordance with the procedures prescribed in the NASA Federal Acquisition Regulation (FAR) Supplement (NFS). As requirements arise, task orders will be awarded pursuant to contract clauses H.3, Task Order Procedure, and H.4, Task Order Solicitation and Selection Procedures. All task order awards will be Cost-Plus-Fixed-Fee. The period of performance for the contracts will be five years from the contract effective date. The contracts will not include a phase-in period. The total maximum cumulative value of the Indefinite Delivery/Indefinite Quantity (IDIQ) contracts is \$47M.

The IAD Request for Proposal (RFP) was released on April 26, 2011, with a response date of June 8, 2011. Amendment 1 was issued on May 17, 2011 to (1) revise submittal requirements and evaluation criteria pertaining to higher-level quality management and (2) provide answers to questions submitted in response to the RFP. The due date for receipt of proposals remained unchanged.

The following companies responded to the RFP:

- Airborne Systems North America (Airborne)
- ILC Dover LP (ILC)
- Jackson Bond Enterprises LLC (Jackson Bond)
- Lockheed Martin Space Systems Company (Lockheed)

Evaluation Procedures

Prior to the issuance of the RFP, a Source Evaluation Team (SET) was appointed to conduct an evaluation of proposals received in response to the RFP in accordance with FAR 15.3 and NFS 1815.3. The RFP set forth the following three evaluation factors:

Factor 1: Mission Suitability

Factor 2: Cost/Price

Factor 3: Past Performance

The RFP provided a detailed definition of the factors and subfactors. The RFP stated that overall, in the selection of an Offeror for contract award, the Mission Suitability, Cost, and Past Performance factors will be of essentially equal importance. The Mission Suitability and Past Performance factors, when combined, are significantly more important than the Cost factor.

Under Factor 1, Mission Suitability, three subfactors were identified including Subfactor 1, Understanding the Requirements and Technical Approach, Subfactor 2, Management, and Subfactor 3, Small Business Utilization. The RFP stated that subfactors 1 and 2 will be of essentially equal importance and each is substantially more important than subfactor 3.

The SET began its evaluation upon receipt of the Past Performance Volumes (Volume III), which were requested from the offerors prior to the proposal due date. The SET members performed a thorough review of each offeror's past performance proposal, all past performance questionnaires provided by references, information obtained from the NASA Past Performance Database (PPDB), the Past Performance Information Retrieval System (PPIRS), and other independent past performance information. The SET considered all of the "performance" and "relevance" findings in assigning an adjectival rating for each offeror as defined in the RFP.

Upon receipt of proposal Volumes I and II, the SET conducted an initial review of each Technical Proposal (Volume I), and the Cost/Price Analyst reviewed each Business Proposal (Volume II), in order to determine if any of the proposals were unacceptable as defined in NFS 1815.305-70. The SET and contracting officer determined that the proposal submitted by Jackson Bond was unacceptable and thus a full evaluation was not conducted on this proposal. On June 6, 2011, the contracting officer obtained concurrence from the SSA to remove the Jackson Bond proposal from further consideration. The contracting officer notified Jackson Bond the same day. Jackson Bond did not request a preaward debriefing. The proposals from Airborne, ILC, and Lockheed, were found to be acceptable as defined in NFS 1815.305-70, thus all warranted a full evaluation.

The contracting officer then reviewed the authority at NFS 1815.305-71 (a), Evaluation of a Single Proposal, and determined that the procedures were appropriate for the IAD source evaluation. In accordance with NFS 1815.305-71 (b) the procedures at NFS 1815.305 (a) apply when "the number of proposals equals the number of awards contemplated..." For IAD, the market research and procurement strategy contemplated between 3 to 5 awards resulting from this multiple award solicitation. Therefore, the contracting officer determined that the procedures at NFS 1815.305 (a) apply as the number of responsive proposals equals the number of awards contemplated. As required by NFS 1815.305-71(a), the contracting officer reviewed the solicitation and the remaining proposals and

determined that (1) the solicitation was not flawed or unduly restrictive, and (2) adequate price competition (APC) exists based on the receipt of multiple responsive and competitive proposals.

NFS 1815.305-71(a) also states that the contracting officer shall determine if the proposal(s) is an (are) acceptable proposal(s). Accordingly, the NASA Langley SEB Advisor and contracting officer requested that the SET review each proposal to determine acceptability rather than evaluating the proposals using adjectival ratings. The SET was instructed to document all weaknesses, significant weaknesses, and deficiencies for each subfactor under Factor 1, Mission Suitability. SET consultants also independently reviewed specific areas of each proposal relevant to the Mission Suitability factor for which they possess subject matter expertise and provided input to the voting members for their consideration. After completion of the individual evaluations for each subfactor, the SET met to discuss individual findings and to develop consensus for each of the offerors. The SET revisited, in caucus, all findings and performed a crosswalk to validate that all proposals were evaluated consistently and objectively. Upon completion of the evaluation, the SET determined whether each individual proposal was acceptable.

The SET also reviewed each of the acceptable offeror's Business Proposals to determine whether the cost proposal was reasonable, realistic, and consistent with the technical approach. The cost proposals were assessed to ensure compliance with the RFP. The SET provided the results of its review to the NASA Cost/Price Analyst who incorporated the results into the detailed analysis of the individual cost proposals. In addition, the SET determined whether each offeror's past performance was acceptable utilizing the past performance evaluation methodology described above.

The SET presented the initial findings for each evaluation factor to the contracting officer. The SET determined that each proposal was acceptable. The contracting officer concurred with the SET findings, as presented below.

Evaluation Findings

Factor 1 – Mission Suitability

Set forth below is a summary of the Mission Suitability findings for the three offerors.

Airborne

Airborne's mission suitability proposal was determined to be acceptable. No significant weaknesses or deficiencies were identified.

Subfactor 1, Understanding the Requirement and Technical Approach

The Airborne proposal was determined to be acceptable under Subfactor 1 (a). The offeror demonstrated its understanding of the technical challenges and an acceptable approach to perform detailed design, based on government-specified layouts and materials, and manufacturing of flexible TPS for inflatable re-entry vehicles. While the offeror was cited with one weakness related to its inadequate discussion of the methods or technical challenges regarding sensor integration, this weakness was limited to one component of Subfactor 1 (a) (5). No significant weaknesses or deficiencies were cited.

Based on this demonstrated understanding, and the acceptability of the overall approach, the offeror's response to Subfactor 1 (a) was determined acceptable.

Airborne was determined to be acceptable under Subfactor 1 (b). The offeror demonstrated its understanding of the technical challenges and an acceptable approach to perform conceptual design, detailed design, and manufacturing of inflatable structures for inflatable reentry vehicles. While the offeror was cited with one weakness related to its inadequate discussion of the technical challenges and approach to hard-packing and redeployment concerns for the inflatable structure, the weakness was limited to one component of Subfactor 1 (b)(2). No significant weaknesses or deficiencies were cited. Based on this demonstrated understanding, and the acceptability of the overall approach, the offeror's response to Subfactor 1(b) was determined acceptable.

Subfactor 2, Management

For Subfactor 2, Airborne was determined to be acceptable. The Airborne proposal contained no weaknesses or significant weaknesses. Airborne demonstrated adequate and available facilities, equipment, and tools to be utilized for design, analysis, development, and manufacture of flexible TPS and inflatable structures for inflatable reentry vehicles. Airborne proposed an acceptable approach to obtain and retain the technical expertise to perform potential task orders received under this contract. Airborne proposed an acceptable approach to overall contract and task management. Airborne proposed an acceptable approach to meeting the minimum higher-level contract quality requirements and demonstrated ANSI/ISO/ASQC Q9001 and AS9100 standards certification. Based on the acceptability of the overall approach, the offeror's response to Subfactor 2 was determined acceptable.

Subfactor 3 – Small Business Utilization

Airborne demonstrated an acceptable commitment to the Small Business Program and provided an acceptable Small Business Subcontracting Plan. No weaknesses or significant weaknesses were identified.

Based on the detailed evaluation as documented herein, the Airborne mission suitability proposal was determined acceptable.

ILC

ILC's mission suitability proposal was determined to be acceptable. No significant weaknesses or deficiencies were identified.

Subfactor 1, Understanding the Requirement and Technical Approach

ILC Dover was determined to be acceptable under Subfactor 1 (a). The Offeror demonstrated its understanding of the technical challenges and an acceptable approach to perform detailed design, based on government-specified layouts and materials, and manufacturing of flexible TPS for inflatable re-entry vehicles. No weaknesses, significant weaknesses, or deficiencies were cited. Based on this demonstrated understanding, and the acceptability of the overall approach, the offeror's response to Subfactor 1 (a) was determined acceptable.

ILC Dover was determined to be acceptable under Subfactor 1 (b). The offeror demonstrated its understanding of the technical challenges and an acceptable approach to perform conceptual design, detailed design, and manufacturing of inflatable structures for inflatable reentry vehicles. While the offeror was cited with one weakness, the weakness was limited to one component of Subfactor 1 (b) (2). Specifically, although ILC demonstrated the importance of packing density for IADs, methods to ensure an acceptable shape is achieved after hard-packing and redeployment, and system testing at appropriate temperatures, the proposal did not adequately address the high temperature requirement associated with operating in the hypersonic IAD entry environments. No significant weaknesses or deficiencies were cited. Based on this demonstrated understanding, and the acceptability of the overall approach, the offeror's response to Subfactor 1 (b) was determined acceptable.

Subfactor 2, Management

For Subfactor 2, ILC was determined to be acceptable. The ILC proposal contained one weakness and no significant weaknesses. ILC demonstrated adequate and available facilities, equipment, and tools to be utilized for design, analysis, development, and manufacture of flexible TPS and inflatable structures for inflatable reentry vehicles. ILC proposed an acceptable approach to obtain and retain the technical expertise to perform potential task orders received under this contract. One weakness was cited under contract and task management. While the offeror demonstrated adequate staffing and resources to perform specific task orders, there was an inadequate discussion related to managing the staff over multiple task orders. ILC proposed an acceptable approach to meeting the minimum higher-level contract quality requirements and demonstrated ANSI/ISO/ASQC Q9001 standards certification. Based on the acceptability of the overall approach, the offeror's response to Subfactor 2 was determined acceptable.

Subfactor 3 – Small Business Utilization

ILC demonstrated an acceptable commitment to the Small Business Program and provided an acceptable Small Business Subcontracting Plan. No weaknesses or significant weaknesses were identified.

Based on the detailed evaluation as documented herein, the ILC mission suitability proposal was determined acceptable.

Lockheed

Lockheed's mission suitability proposal was determined to be acceptable. No significant weaknesses or deficiencies were identified.

Subfactor 1, Understanding the Requirement and Technical Approach

Lockheed Martin was determined to be acceptable under Subfactor 1 (a). The offeror demonstrated its understanding of the technical challenges and an acceptable approach to perform detailed design, based on government-specified layouts and materials, and manufacturing of flexible TPS for inflatable re-entry vehicles. The offeror was cited with two weaknesses. The first weakness related to Lockheed's inadequate discussion of the methods or technical challenges regarding sensor integration. For the

second weakness, while Lockheed discussed the need for advances in TPS construction techniques, identified materials and potential arrangements (or lamina) of the TPS, they did not adequately discuss methods by which the flexible TPS layers would be joined together and then integrated onto the Inflatable Structure. The weaknesses were limited to one component of Subfactor 1 (a) (2) and one component of Subfactor (a) (5). No significant weaknesses or deficiencies were cited. Based on this demonstrated understanding, and the acceptability of the overall approach, the offeror's response to Subfactor 1 (a) was determined acceptable.

Lockheed Martin was determined to be acceptable under Subfactor 1 (b). The offeror demonstrated its understanding of the technical challenges and an acceptable approach to perform conceptual design, detailed design, and manufacturing of inflatable structures for inflatable reentry vehicles. While the offeror was cited with one weakness for not adequately demonstrating its understanding of the overall load integration response, the weakness was limited to one component of Subfactor 1 (b) (4). No significant weaknesses or deficiencies were cited. Based on this demonstrated understanding, and the acceptability of the overall approach, the offeror's response to Subfactor 1 (b) was determined acceptable.

Subfactor 2, Management

For Subfactor 2, Lockheed was determined to be acceptable. The Lockheed proposal contained no weakness or significant weakness. Lockheed demonstrated adequate and available facilities, equipment, and tools to be utilized for design, analysis, development, and manufacture of flexible TPS and inflatable structures for inflatable reentry vehicles. Lockheed proposed an acceptable approach to obtain and retain the technical expertise to perform potential task orders received under this contract. Lockheed proposed an acceptable approach to overall contract and task management. Lockheed proposed an acceptable approach to meeting the minimum higher-level contract quality requirements and demonstrated ANSI/ISO/ASQC Q9001 and AS9100 standards certification. Based on the acceptability of the overall approach, the offeror's response to Subfactor 2 was determined acceptable.

Subfactor 3 – Small Business Utilization

Lockheed demonstrated an acceptable commitment to the Small Business Program and provided an acceptable Small Business Subcontracting Plan. No weaknesses or significant weaknesses were identified.

Based on the detailed evaluation as documented herein, the Lockheed mission suitability proposal was determined acceptable.

Factor 2, Cost/Price Analysis

The SET and NASA Cost/Price Analyst performed an analysis of the proposed prices to assess price reasonableness and cost realism, and to confirm the offerors demonstrated a clear understanding of the requirements and possessed the ability to perform the contract for the stated cost. This evaluation resulted in no cost adjustments to the Airborne, ILC, and Lockheed proposals.

In accordance with FAR 15.402, the contracting officer has determined that the offerors' proposed prices are fair and reasonable based on the spread from the highest proposed price to the lowest proposed price, comparison of the proposed prices to the Government estimate, and the fact that adequate price competition was obtained.

Factor 3, Past Performance

The SET evaluated the offerors' past performance records (including those of significant subcontractors) in accordance with provision M.2 of the RFP. The SET considered records of performing contracts similar in size, scope and complexity to IAD. Both the performance records and the pertinence of the experience were evaluated. A confidence rating was assigned in accordance with NFS 1815.305.

Offeror	Performance	Pertinence	Level of Confidence
Airborne	Good	Very Highly Pertinent	Moderate
ILC	Very Good	Highly Pertinent	High
Lockheed	Good	Pertinent	Moderate

The Airborne team's experience overall was found to be very highly pertinent in comparison to the IAD requirements. The Airborne team demonstrated very highly pertinent experience in all content sections, highly pertinent experience for complexity, and pertinent experience for the size component. Overall, the Airborne team demonstrated a good past performance record. Therefore, the Airborne team was assigned a Moderate confidence level rating for the past performance factor.

The ILC team's experience overall was found to be highly pertinent in comparison to the IAD requirements. ILC demonstrated either highly pertinent or very highly pertinent experience in each of the content areas, highly pertinent experience for complexity, and very highly pertinent experience for the size component. Overall, the ILC team demonstrated a very good past performance record. Therefore, the ILC team was assigned a High confidence level rating for the past performance factor.

The Lockheed team's experience overall was found to be pertinent in comparison to the IAD requirements. The Lockheed team demonstrated pertinent experience in all content areas with the exception of one area which was determined somewhat pertinent. The team demonstrated pertinent experience for complexity, and highly pertinent experience for the size component. Overall, the Lockheed team demonstrated a good past performance record. Therefore, the Lockheed team was assigned a Moderate confidence level rating for the past performance factor.

Both Airborne and Lockheed were assigned a Moderate Level of Confidence rating for the past performance factor. A Moderate rating is defined as "The offeror's relevant past performance is pertinent to this acquisition, and it demonstrates effective performance; fully responsive to contract requirements; reportable problems, but with little identifiable effect on overall performance." Based on the Moderate confidence level rating, the past performance for Airborne and Lockheed were determined to be acceptable.

ILC was assigned a High Level of Confidence rating for the past performance factor. A High rating is defined as "The offeror's relevant past performance is highly pertinent to this acquisition; demonstrating

very effective performance that would be fully responsive to contract requirements with contract requirements accomplished in a timely, efficient, and economical manner for the most part with only minor problems with little identifiable effect on overall performance.” Based on the High confidence level rating, the past performance for ILC was determined to be acceptable.

Basis for Selection

The SET presented its final findings to me on July 29, 2011. I am convinced that the SET conducted a thorough, fair, and objective evaluation of all proposals in accordance with the established evaluation factors and NFS 1815.305 (a). As documented earlier, the contracting officer determined that the procedures at NFS 1815.305 (a) apply as the number of responsive proposals equals the number of awards contemplated. As required by NFS 1815.305-71(a), the contracting officer reviewed the solicitation and the remaining proposals and determined that (1) the solicitation was not flawed or unduly restrictive, and (2) adequate price competition exists based on the receipt of multiple responsive and competitive proposals.

NFS 1815.305-71(a) also requires that the contracting officer determine if the proposal(s) is an acceptable proposal. The contracting officer reviewed the SET findings and determined that each proposal was acceptable. I concur with the findings of the SET and contracting officer. Specifically, in evaluating the three offerors for Factor 1, Mission Suitability, I noted that each offeror was determined acceptable under Subfactor 1, Understanding the Requirements and Technical Approach, Subfactor 2, Management, and Subfactor 3, Small Business Utilization. Regarding Factor 2, Cost/Price, a detailed analysis of the proposed prices was performed and each proposal was determined to be reasonable and realistic and reflects a clear understanding of the requirements. For Subfactor 3, Past Performance, each proposal was determined to be acceptable based on the offerors receiving moderate or better adjectival ratings.

DECISION

Based on the determinations above, NFS1815.305-71(a) requires that the SSA direct the contracting officer to:

- (1) Award without discussions provided the contracting officer determines that adequate price competition exists;
- (2) Award after negotiating an acceptable contract; or
- (3) Reject the proposal and cancel the solicitation.

As stated above, I find that each offeror was determined acceptable under Factor 1, Mission Suitability, and Factor 3, Past Performance. In addition, for Factor 2, Cost/Price, I find that each offeror’s proposal was reasonable, realistic, and reflect a clear understanding of the requirements. Last, I noted during the briefing to me on July 29, 2011 that the contracting officer determined, based on the overall acceptability of the proposals, the limited number of weaknesses identified, and the fact that no significant weaknesses or deficiencies were identified, that discussions were not necessary.

Therefore, as required pursuant to NFS1815.305-71(a), I hereby direct the contracting officer to award to Airborne, ILC, and Lockheed without discussions based on the findings documented.

A handwritten signature in black ink, appearing to read 'Luat T. Nguyen', with a long horizontal flourish extending to the right.

Luat T. Nguyen
Source Selection Authority