

**National Aeronautics and Space Administration
Ames Research Center
Moffett Field, California 94035-1000**

**Justification for Other than Full and Open Competition
[FAR 6.303-2(a)(1)]**

Summary Information:

Initiating Office: NASA Ames Research Center
Aviation Systems Division (Code AF)

Purchase Request No.: 4200324424

Procurement Title: Airspace Concept Evaluation System (ACES) Systems Integration
and Engineering Software Development

Total Estimated Value: [REDACTED] Redactions per FOIA Exemption 5

Period of Performance: March 1, 2010 through July 1, 2010

Statutory Authority: 10 USC 2304(c)(1), *Only one responsible source and no other
supplies or services will satisfy Agency requirements.*

This Justification for Other than Full and Open Competition (JOFOC) has been prepared in accordance with the requirements of Federal Acquisition Regulation (FAR) 6.303 and NASA FAR Supplement (NFS) 1806.303.

Detailed Information:

A. Nature and/or description of the action being approved. [FAR 6.303-2(a)(2)]

NASA Ames Research Center (ARC) proposes to negotiate a sole-source contract modification with Raytheon Company to extend the period of performance of contract NNA08BA47C for four months and increase the value to reflect new work requirements.

This contract modification is for the acquisition of refined results based upon the knowledge gained as a result of the extensive analysis performed during the contracted research, and to solicit consensus in the form of recommended inputs into the Multi-Agency Joint Planning and Development Office (JPDO) NextGen planning documents and portfolio analysis and consequently JPDO and NASA activities. The Government intends to obtain this service to continue the support in several areas where the contractor's support is unique and time critical. This justification is for the continued provision of the highly specialized services currently provided for under contract NNA08BA47C which was competitively awarded to Raytheon Company under the NASA Research Announcement (NRA) entitled "Research Opportunities in Aeronautics – 2007 NNH07ZEA001N", released June 12, 2007, Amendment No. 5 Integration of Advanced Concepts and Vehicles into the Next Generation Air Transportation System (NextGen).

The extension is needed to enable the continuation of the current contract in order to enhance the value of the deliverables outlined in Task 9, "Dissemination of Results," through further refinement and improvement of the results obtained. The research and analysis conducted over

the course of this contract has highlighted the need for updates to the planning documents and portfolio analysis. The extension will allow these results to be efficiently incorporated into the JPDO NextGen planning documents and portfolio analysis. These planning documents consist of the Concept of Operations (ConOps), Integrated Work Plan (IWP) and Enterprise Architecture (EA). Both the ConOps, IWP and portfolio analysis are currently being updated and this effort would be ideally timed to achieve the maximum benefit.

Additionally, the JPDO has identified this information as highly relevant data that is an enhancement to the EA, IWP and Joint Planning Environment (JPE). The deliverables from this contract modification will be submitted to the JPDO Change Control Board and upon approval will shape future ARMD research and the project milestones for four ARMD programs.

B. Description of the supplies or services required to meet the agency's needs (including estimated value). [FAR 6.303-2(a)(3)]

The estimated cost of the current contract is [REDACTED] exclusive of the fixed fee of [REDACTED] with a period of performance of June 13, 2008, through February 28, 2010. This acquisition is for an additional 4 months, extending the period of performance through July 1, 2010, with an estimated increase in value of [REDACTED]. The total contract value with this increase will be [REDACTED]. In accordance with FAR 6.303-2(a)(7), the NASA Contracting Officer has made a determination that the anticipated cost to the Government will be fair and reasonable and has provided certification on the signature page of this document.

Task 9, "Dissemination of Results," has been focused on three User and Stakeholder workshops (contract deliverables), technical papers and presentations at professional technical conferences, and a final report (contract deliverable). To be most relevant to the JPDO, this research data and information needs to be inserted and expanded upon into the JPDO's NextGen ConOps, EA and IWP. Therefore, this extension will provide for the refinement and transfer of research data and information to the JPDO for their specific needs.

Under the proposed contract modification, the contractor will be required to include the following information in their recommendations:

- Indication of whether the recommendations relate to the ConOps or the IWP.
- If the recommendations are ConOps changes, the contractor shall revise text within the most recent draft version of the ConOps.
- If the recommendations are for the most recent draft of the IWP, the recommendations shall be categorized into separate categories for modifications or additional Research, Development, Enablers, Operational Improvement or Policy elements.
- An indication of whether these IWP recommended changes relate to the entire set of vehicles analyzed by the team or a subset of the vehicles.

Deliverables

- 1) The contractor shall provide a document that describes the identification of the contract developed information that is directly relevant to the JPDO's ConOps, Enterprise Architecture (EA), and Integrated Workplan (IWP).
- 2) The contractor shall provide a briefing of these results to the JPDO System Engineering and Architecture Divisions.
- 3) The contractor shall provide a document that provides a detailed review of the policy, research, and development impacts for the new vehicle operations produced and analyzed during the course of the contract.
- 4) Using the JPDO's change control process, the contractor shall provide recommendations for the incorporation of the contract results and detailed review in Deliverable 3 into the JPDO's Joint Planning Environment (JPE). This change control process requires recommendations to be coordinated with the JPDO working groups and receive subject matter expert review prior to incorporation into the JPE.

C. An identification of the statutory authority permitting other than full and open competition. [FAR 6.303-2(a)(4)]

The statutory authority is 10 USC 2304(c)(1), *Only One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements*.

D. Demonstration of the proposed contractor's unique qualification or the nature of the acquisition requires use of the authority cited. [FAR 6.303-2(a)(5)]

In accordance with FAR 6.302-1(a)(2)(iii), for DOD, NASA, and the Coast Guard, services may be deemed to be available only from the original source in the case of follow-on contracts for the continued provision of highly specialized services when it is likely that award to any other source would result in substantial duplication of cost to the Government that is not expected to be recovered through competition, or unacceptable delays in fulfilling the agency's requirements.

Raytheon Company is currently under contract to provide NASA with a system study that addresses the issues associated with deploying new/advanced vehicles by exploring the trade offs among procedures, vehicle characteristic, and overall NextGen performance. The work to be provided in this extension is a continuation and refinement of the highly specialized services performed by Raytheon Company in its current contract.

The following descriptions characterize the highly specialized services currently being performed:

- Activities associated with this task require in-depth knowledge of the current contract requirements, assumptions, analysis methods, model development and output data, study results, conference papers, briefing packages and other products.

- A rapid response is dependent upon awareness of the subject matter experts consulted over the course of the study both inside and outside the study teams and detailed knowledge of the JPDO organizational structure, methods and planning documents.
- Detailed knowledge of each of the teams' analysis processes and methods is required to formulate JPDO planning document inputs.

The additional four month extension to the current contract is necessary to avoid substantial duplication of costs and unacceptable delay for the reasons listed below.

Substantial Duplication of Costs:

Necessary labor costs to fully familiarize an alternate contractor with ACES systems integration and engineering software development would substantially duplicate a significant amount of the [REDACTED] already expended by NASA to complete the tasks performed by Raytheon to date. This substantial duplication of costs would not be recovered through competition, especially in consideration of the relative small amount of additional work effort to be performed through the contract extension.

Unacceptable Delay:

An extensive and time consuming effort would be required to bring a new entity up to speed and to obtain the in-depth expertise required to complete the additional effort. The 20 month effort expended by Raytheon in the development of the 5 business cases formulated and the aircraft designed for successful commercial implementation of the business cases required in-depth expertise. The amount of time required to gain this expertise would create an unacceptable delay in incorporating the results into the JPDO NextGen planning documents. This would impact NextGen operations and also safety, environmental and policy implications of the developed business cases.

E. Description of efforts made to ensure that offers are solicited from as many potential sources as is practicable, including whether a notice was or will be publicized as required by FAR Subpart 5.2 and, if not, which exception under 5.202 applies. [FAR 6.303-2(a)(6)]

As required by FAR Subpart 5.2, a synopsis of the Government's intent to award this sole source extension was posted on January 12, 2009 through January 27, 2010 on the NASA Acquisition Internet Service (NAIS) and FedBizOpps.gov.

F. A determination by the contracting officer that the anticipated cost to the Government will be fair and reasonable. [FAR 6.303-2(a)(7)]

The contracting officer's signature on this document indicates that the contracting officer has determined that the anticipated cost to the government will be fair and reasonable. Prior to execution of the contractual instrument, a proposal analysis will be performed in accordance with FAR 15.404. The proposal analysis will ensure that the final agreed-to price for the contract extension is fair and reasonable. Analysis will include cost and price evaluation techniques. Pre-negotiation objectives will be prepared prior to the initiation of negotiations and will be approved in accordance with FAR 15.406 prior to the conduct of negotiations.

G. Description of the market research conducted and the results or a statement of the reason market research was not conducted.

This procurement was originally a selection under NASA Research Announcement (NRA) Entitled "Research Opportunities in Aeronautics – 2007 NNH07ZEA001N," released June 12, 2007, Amendment No. 5 Integration of Advanced Concepts and Vehicles into the Next Generation Air Transportation System (NextGen). The solicitation process was initiated with a notice of Research Opportunities in Aeronautics, which was posted to NSPIRES and Grants.gov on October 5, 2007. The original NRA allowed for submission of proposals from all qualified sources. A total of 3 proposals were received.

The contract was competitively awarded and we are now extending the contract on a sole source basis for the reasons set forth in this JOFOC. Therefore, additional market research is not applicable.

The initial market research conducted for the original solicitation established that Raytheon Company had the qualifications and experienced subject matter experts available to perform the work.

H. Any other facts supporting the use of other than full and open competition. [FAR 6.303-2(a)(9)]

The deliverables covered by this contract require a deep and broad understanding of the functioning and authorizing environment of the NASA ASP, JPDO, and partner agencies, including the Federal Aviation Administration (FAA), as well specialized knowledge and understanding of the technologies and policy issues involved in development of NextGen and the necessary supporting research. The contractor's performance has been fully satisfactory in all areas.

I. Listing of the sources, if any, that expressed, in writing, an interest in the acquisition. [FAR 6.303-2(a)(10)]

As required by FAR Subpart 5.2, a synopsis of the Government's intent to award this sole source extension was posted on January 12, 2009, with a response deadline of January 27, 2010, on the NASA Acquisition Internet Service (NAIS) and FedBizOpps.gov. No other sources have expressed interest in providing the additional work required by this extension.

J. Statement of the actions, if any, the agency may take to remove or overcome any barriers to competition before any subsequent acquisition for the supplies or services required. [FAR 6.303-2(a)(11)]

This is a discrete requirement and the Government does not anticipate future work requirements beyond the identified period set forth for the contract extension. Any future identified effort for ACES systems integration and engineering software development beyond the period set forth in the extension will be procured competitively.

Signature Page

Requirement Initiator:
*Nancy Mendonca, NASA
JPDO Technical
Integration Manager,
Airspace Systems Program
Office*

I certify that the facts presented in this justification are accurate and complete.



Signature

16 Feb 2010

Date

Contracting Officer:
Manuel Herrada

I hereby determine that the anticipated cost to the Government will be fair and reasonable and certify that this justification is accurate and complete to the best of my knowledge and belief. [FAR 6.303-2(a)(12)]



Signature

26 FEB 2010

Date

cc (after approval):
JAB/241-1