NNJ11JF11P

JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION (JOFOC)

1 **This document is a justification for other than full and open competition prepared by the NASA Johnson Space Center.**

2 **The nature and/or description of the action being approved:**
This justification provides the rationale for contracting by other than full and open competition for the acquisition of software licenses for Aspentech chemical process simulation packages including Aspen Custom Modeler, Aspen Plus, and Aspen Dynamics.

3 **Description of the supplies or services required, include an estimated value:**

- Two simultaneous users of the "Aspen Custom Modeler", "Aspen Plus", or "Aspen Dynamics" software tools with the Excel interface "Aspen Simulation Work"
- This is implemented by the purchase of 40 "license tokens" for use with the Aspen Engineering Suite

The licenses enable Johnson Space Center (JSC) or Engineering and Science Contract Group (ESCG) employees' access to the Aspentech software running on JSC or ESCG computer workstations.

The license period is for 1 year.

This procurement will include the software updates, and technical support for software utilization and model generation. The estimated value for the procurement is $162,800.

4 **Statutory authority permitting other than full and open competition:**
Justification for Other Than Full and Open Competition pursuant to 10 U.S.C. 2304(c)(2) FAR 6.302-2, "When the agency's need for the supplies or services is of such an unusual and compelling urgency that the Government would be seriously injured unless the agency is permitted to limit the number of sources from which it solicits bids or proposals"

NASA has previously used Aspentech software to support projects and programs including the International Space Station, Constellation Orion and Altair, and a series of technology development projects (Advanced Life Support, ETDP Exploration Life Support, and ETDD projects). While programs are being reformulated, NASA expects to continue to support vehicle conceptual design for the Human Spaceflight Architecture Team (HAT) and the technology development and demonstration activities for Advanced Exploration System

(AES) and for the Office of the Chief Technologist (OCT) with this software, as well as supporting International Space Station.

5 **A demonstration that the proposed contractor's unique qualifications or the nature of the acquisition requires use of the authority cited:**
Aspentech is the sole source because they do not license their product to outside vendors, and are the only source on the market to provide the Aspen Custom Modeler, Aspen Plus, and Aspen Dynamics (and the Aspen Properties chemical database that supports all of those.)

6 **Description of the efforts made to ensure that offers are solicited from as many potential sources as practicable:**
Due to the need to use existing Aspentech models (especially Aspen Custom Modeler) and existing personnel trained in Aspentech software, there are no practical alternative sources at this time.

7 **Description of the market survey conducted, and the results, or a statement of the reasons a market survey was not conducted:**
As described in item 6, it is necessary to renew the expiring Aspentech licenses to allow use of the existing Aspentech software models and utilize personnel already trained with Aspentech products.

NASA has evaluated competitor's software periodically to make sure we still have the best product. Aspen has bought several competitors (HYSYS), and other options (COMSOL) do not have the same level of electrolyte chemistry support that we require for modeling complicated things like human urine.

8 **Other facts supporting the use of other than full and open competition:**
NASA has invested over 15 years in developing the models that operate on Aspentech systems. Changing software packages now to some other system would bring analysis to a halt and leave current missions unsupported for years until basic capabilities were brought back, if they could be at all given current budget expectations.

9 **Sources, if any, that expressed an interest in writing in the acquisition:**
Pursuant to FAR 5.202, no notice to the Government wide Point of Entry (GPE) is required when the proposed contract action is made under the conditions described in 6.302-2 and the Government would be seriously injured if the agency complies with the time periods specified in FAR 5.203.

None.

10 **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:**

Chemical process simulation analysis is relatively specialized and not widely used within EC. It is not anticipated that there is a need for substantial additional licenses. The small number of required licenses does not warrant retraining of analysis personnel for other software. However, if in the future substantially more users for this type of analysis were employed by the government, diversifying between the Aspentech software and other tools might be appropriate.

Technical Officer: I certify that the supporting data presented in this justification are accurate and complete.

Molly Anderson 8/9/11

(Molly Anderson/Life Support Analysis) (Aug 9 '11)

Contracting Officer: 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.

Marie D. Klement 8-15-11

Contracting Officer (Date)