

## **Advance Contract Award Notice (ACAN)**

**Title: Psychological Space Operations Support for the CSA Astronauts**

**# 9F008-20160634**

### **1. Advance Contract Award Notice (ACAN)**

An ACAN is a public notice indicating to the supplier community that a department or agency intends to award a contract for goods, services or construction to a pre-identified supplier, thereby allowing other suppliers to signal their interest in bidding, by submitting a statement of capabilities. If no supplier submits a statement of capabilities that meets the requirements set out in the ACAN, on or before the closing date stated in the ACAN, the contracting officer may then proceed with the award to the pre-identified supplier.

### **2. Definition of the requirement**

#### **1.0 Background**

The Canadian Space Agency (CSA) Operational Space Medicine (OSM) Program is mandated to ensure the overall health and safety of the Canadian Astronauts. To fulfill this mandate the OSM Program is required to address medical issues and requirements pertaining to the International Space Station (ISS) missions in coordination with the ISS partners. This includes provision of clinical psychology oversight and support in accordance of the established ISS standards during all mission phases: selection, training, as well as in-flight and post-flight phases.

In view of the next Canadian long duration mission (C3) planned for November 2018 launch, the 2016-2017 astronaut recruitment campaign, as well as the need for general support and consulting services for the CSA Operational Space Medicine in the area of Human Behaviour and Performance (HBP), the Canadian Space Agency has a requirement for services by an experienced aerospace psychologist. This includes provision of psychological oversight and support services for the Canadian astronauts, assigned and non-assigned, services to assist in the evaluation of candidates during astronaut selections, as well as general consulting services in the area of clinical psychology, in accordance with the ISS Human Behaviour and Performance standards. The services are required March 1, 2017 until March 31, 2018 with 2 option years to extend till March 31, 2020.

#### **2.0 The tasks to be covered under this contract include:**

- a. Provision of Human Behavioural and Performance support for the CSA astronaut assigned for the C3 mission, including support for the family, in accordance with established ISS medical standards.

- b. Provision of Human Behavioural and Performance support for the non-assigned CSA astronauts, and their families, as and if required.
- c. Provision of clinical psychology oversight during the current selection campaign between March, 2017 and October 31, 2017. The service provider is required to be available during the above noted time period for the estimated level of effort of 45 days, and be available to travel to and work at different locations in Canada. Estimated travel status days are 27 days. (The schedule and requirements pertaining to the selection campaign are subject to change).
- d. Provision of advice in the area of clinical psychology as required.
- e. Provision of assistance and advice in the coordination of the CSA HBP activities and standards with the ISS Partners. This may include representing CSA at the relevant MMOP Working Groups and at associated/relevant meetings/ workshops/ conferences.

### **3.0 Deliverables:**

- a. Support provided for the CSA C3 mission astronaut and his family, as per established ISS standards (in person, by phone, by Email, written reports as required).
- b. Support provided for the CSA non-assigned astronaut and their families, as required (in person, by phone/Email).
- c. Oversight provided for the 2016-2017 astronaut recruitment campaign, in the form of advice, review of candidate data, conduction of assessments and compilation of lessons learned (in person, by phone, by Email, written reports).
- d. Advice and recommendations provided for the CSA Operational Space Medicine (in person, by phone, Email, or written reports).
- e. Assistance and advice provided in the coordination of the CSA HBP activities and standards with the ISS Partners, including but not limited to preparation of documents, review of materials, participation in relevant tele/videoconferences/meetings/workshops/conferences (written documents, review comments, minutes of the meeting/workshop /conferences, copies of relevant material obtained in Electronic or other format).

### **3. Criteria for assessment of the Statement of Capabilities (Minimum Essential Requirements)**

In order to successfully perform the required work, the consultant must:

1. Be a licensed clinical psychologist.
2. Have at least 5 years of experience working as clinical psychologist in aerospace organizations/contexts, including direct experience working for space organizations.

3. Be knowledgeable of the International Space Station (ISS) Human Behaviour and Performance (HBP) support requirements and standards, with at least 5 years of experience with supporting assigned crewmembers and their families.
4. Be knowledgeable of the ISS HBP support requirements and standards for non-assigned astronauts, with at least 5 years of experience with supporting non-assigned crewmembers and their families.
5. Be knowledgeable of the ISS astronaut selection standards, including direct experience with psychological evaluation planning and conducting evaluations. Experience with a multitude of campaigns is an asset.
6. Have an established relationship with the active CSA astronauts and their families.
7. Have at least 5 years of experience in developing standards for aerospace organizations with focus on psychological standards, including direct experience with the development of HBP standards for space.
8. Have experience with participation in national and/or international forums and proven ability to present information, lead discussions and bring colleagues to a consensus.
9. Have knowledge and understanding of the CSA Operational Space Medicine mandate and activities.

#### **4. Justification for the Pre-Identified Supplier**

Dr. Walter Sipes is the most experienced clinical psychologist available to provide the required services during the period requested. He possesses all the qualifications required, notably:

- Dr. Sipes is a clinical psychologist with the required background and qualifications. He has 36 years of experience working as clinical psychologist in aerospace organizations/contexts, including 27 years of experience working with a space organization (NASA). His experience as a helicopter pilot for the US Army and clinical psychologist in the US Air Force gave him the practical experience in the operational aviation world. After receiving his clinical psychology doctorate in 1979, Dr. Sipes worked extensively with the military aviator communities. His understanding of the human factors and safety needs of the operational missions were refined during his post-doctoral aviation specialization program at the University of Southern California. After retiring from the military in 1994, he worked as a clinical psychologist contractor at the Johnson Space Center supporting Space Shuttle and International Space Station (ISS) missions for 5 years, including provisions of support for US astronaut selections since 1989. In 2004, Dr. Sipes was hired by the National Aeronautics and Space Administration (NASA) as a civil servant space psychologist and provided clinical services and training to US and International Partner astronauts and their family members until his retirement from NASA in 2014.
- Dr. Sipes is knowledgeable of the International Space Station HBP support requirements and standards having provided operational and clinical support for

- 24 mission assigned American crewmembers and their families during pre- in- and post flight phases over 18 years. He was also the back-up psychologist for two Canadian and three Japanese astronauts flying on the ISS. Furthermore, Dr. Sipes was the US government monitor of 11 contractors who provide operational psychological support to the ISS astronauts.
- Dr. Sipes is knowledgeable of the International Space Station HBP support requirements and standards for non-assigned astronauts, with 18 years of experience supporting non-assigned crewmembers and their families. Specifically, he has provided clinical/psychological counselling services to 25 astronauts and 35 astronaut spouses, and is well familiar with the stresses on non-assigned astronauts and their families. He has also given psychological and expedition training to nine Astronaut Candidate classes.
  - Dr. Sipes is known as a trusted care provider by the Canadian astronauts and their families. While working at NASA he acted as the back-up psychologist for two Canadian assigned astronauts and their families, as well as provided standard support for the non-assigned astronauts and families based in Houston, Texas. Through these interactions he developed a trusting relationship with the active Canadian astronauts and their families.
  - Dr. Sipes is knowledgeable of and experienced with all the aspects of the International Space Station astronaut selections from the point of view of the Human Behaviour and Performance. Between 1989 and 2013 he supported all of the nine US astronaut selection campaigns that took place during that period. During the last five of these he was working at NASA, and for two of them was also responsible for planning the psychological portions that involved testing, interviews and other assessments. He also participated in the 2009 Canadian Astronaut Selection Campaign.
  - Dr. Sipes has 29 years of experience in developing standards for aerospace organizations, including 18 years of experience with the development of ISS HBP standards (astronaut competencies and psychological standards). While in the Air Force he developed psychological and neuropsychological standards for aircrew returning to flying status after they were diagnosed with psychiatric and/or psychological conditions which disqualified them from flying duties. Also, he developed human factor standards for aircraft accident investigations while he was an appointed Consultant to the US Air Force Surgeon General on aviation human factors. For 18 years he was an active member of an international working group responsible for the development and implementation of HBP standards for the ISS and his opinions were well respected and his ability to diplomatically work with this diverse group of experts was well received.
  - Dr. Sipes has a solid understanding of and wide experience with psychological standards, requirements and support methods for spaceflight. For example, he planned and collaborated with US and international researchers on psychological, sleep, circadian, habitability, and human factors for current and future space operations; He was the supervisor of a cognitive test flown on the International Space Station (Spaceflight Cognitive Assessment Tool for Windows); He monitored the psychological portion of a number of space analog studies (bed rest) to include screening, selection, and psychological support of test subjects. He is

also the first author of Behavioral Health and Performance chapters in three separate space medicine textbooks.

- Dr. Sipes has a good knowledge and understanding of the CSA Operational Space Medicine mandate and activities having previously acted as a consultant for the CSA OSM providing advice on test development (e.g. neurocognitive assessment tool), and preparing briefing materials.

#### **5. Government Contracts Regulations Exception(s)**

The following exception(s) to the Government Contracts Regulations is (are) invoked for this procurement under subsection 6(d) - only one person is capable of performing the work.

#### **6. Ownership of Intellectual Property**

Canada intends to retain ownership of any Foreground Intellectual Property arising out of the proposed contract on the basis that the main purpose of the contract is to generate knowledge and information for public dissemination.

#### **7. Period of the proposed contract or delivery date**

The proposed contract is from the award date till March 31, 2018

#### **8. Option to extend the contract period**

The Contractor grants to government of Canada the irrevocable option to extend the term of this contract by two (2) periods of one (1) year at the time each under the same terms and conditions. Government of Canada may exercise this option at any time by sending a notice to the Contractor at least 30 calendar days prior to the contract expiry date.

#### **9. Cost estimate of the proposed contract**

The estimated value of the contract is:

Base Period: \$ 122,000 USD (March 1, 2017 – March 31, 2018)

Option 1: \$82,000 USD (April 1, 2018 – March 31, 2019)

Option 2: \$69,000 USD (April 1, 2019 – March 31, 2020)

#### **10. Name and address of the pre-identified supplier**

Walter Sipes, PhD  
Aerospace Psychologist  
3541 North Calle Floreada  
Tucson, Arizona 85750

### **11. Suppliers' right to submit a statement of capabilities**

Suppliers who consider themselves fully qualified and available to provide the goods, services or construction services described in the ACAN may submit a statement of capabilities in writing to the contact person identified in this notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

### **12. Closing date for a submission of a statement of capabilities**

**The closing date and time for accepting statements of capabilities is January 31, 2017 at 2:00 p.m. EST.**

### **13. Inquiries and submission of statements of capabilities are to be directed to:**

Claudine Morin  
Contracting officer, Procurement and contracts administration  
Canadian Space Agency / Government of Canada  
6767 route de l'aéroport  
Saint-Hubert Québec  
J3Y 8Y9  
Phone: 450-926-4427  
Fax: 450-926-4969  
email: [claudine.morin@canada.ca](mailto:claudine.morin@canada.ca)

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The Canadian Space Agency is exempt from all of Canada's national and international trade agreements.

Suppliers who consider themselves fully qualified and available to provide the services/goods described herein, may submit a statement of capabilities in writing to the contact person identified in this Notice on or before the closing date of this Notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

The file number, the CSA contact name and the closing date of the ACAN must appear on the outside of the envelope in block letters or, in the case of a facsimile transmission, on the covering page.

The Crown retains the right to negotiate with suppliers on any procurement. Documents may be submitted in either official language of Canada.