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LETTER OF INTEREST
LETTRE D'INTÉRÊT

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Munitions Division (BK) / Division des munitions (BK)
11 Laurier St./11, rue Laurier
8C2, Place du Portage, Phase III
Gatineau
Québec
K1A 0S5

Title - Sujet Multi-Role Field Artillery Fuze Industry Day for Multi-Role Field Artillery Fuze	
Solicitation No. - N° de l'invitation W8486-217708/B	Date 2022-03-22
Client Reference No. - N° de référence du client W8486-217708	GETS Ref. No. - N° de réf. de SEAG PW-\$\$BK-383-28611
File No. - N° de dossier 383bk.W8486-217708	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Daylight Saving Time EDT on - le 2022-06-10 Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Langdon (bk div), Darren	Buyer Id - Id de l'acheteur 383bk
Telephone No. - N° de téléphone (819) 639-3772 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Specified Herein Précisé dans les présentes	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein – Voir ci-inclus	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie) Signature Date	

Multi-Role Field Artillery Fuze

1. Purpose

1.1. The purpose of this notification is to inform of an upcoming virtual Industry Day to provide information and have discussions on the Multi-Role Field Artillery (MRFAF) and Point Detonating (PD) Fuses with representatives of the Government of Canada and members of Canada's Munitions Supply Program (MSP) partners.

1.2. Public Works and Government Services Canada's (PWGSC) intent for this Industry Day is to engage Industry in a consultative process to openly discuss the requirements to manufacture the MRFAF and PD fuses via the MSP.

2. Requirement

2.1. The Canadian Armed Forces (CAF) has a requirement to acquire a MRFAF, which will be used with 105mm and 155mm High Explosive (HE) Bursting projectiles with minimum modes of operation of Point Detonating (PD), Delay, Proximity (PROX), and Electronic Time (ET).

2.2. To meet the needs of the CAF, the Department of National Defence (DND) intends on possibly procuring an initial quantity of 31,000 MRFAF followed by an estimated average quantity of 6,200 MRFAF annually until 2030 and potentially beyond. Other main deliverables may include training aids as well as technical documentation and support. Finally, the Government of Canada will also give consideration to have this requirement fulfilled through the Munitions Supply Program (MSP), being Canada's preferred source of supply for ammunition. To this end, an Original Equipment Manufacturer (OEM) may establish a partnership with one or more MSP company through an agreed upon workshare arrangement that may include the issuance of the required manufacturing licences and the transfer of the necessary manufacturing information, technologies, and know-how for their current MRFAF and future improvements.

3. Industry Day

3.1. The virtual Industry Day will be held via MS Teams on 21 April, 2022 at 9:00 AM EDT. Following the virtual group session, there will be opportunities for individual interested parties to meet directly with representatives of Canada and the MSP Partners to discuss the requirement further.

3.2. Interested parties are asked to register for the event by contacting the Contracting Authority identified below directly by email by 2:00 PM EDT on 13 April, 2022. Email registration requests require the names, contact information and roles of all parties wishing to attend.

4. Contracting Authority

Important Notes to Respondents:

All information, communication or correspondence shall be directed to the Contracting Authority ONLY. No other member or representative of the Government of Canada can be informed, challenged or otherwise communicated with, including carbon copy or blind carbon copy on an emails or written correspondence regarding this RFI.

4.1. Any correspondence shall be directed, in writing by email, in either official language of Canada, to the PSPC Contract Authority identified below:

Darren Langdon
Supply Team Leader
Munitions and Weapons Systems Division - BK/BM,
Public Works and Government Services Canada (PWGSC)

E-mail: Darren.Langdon@tpsgc-pwgsc.gc.ca

4.2. Changes to this notification may occur and will be advertised on the Government Electronic Tendering System, <https://BuyandSell.gc.ca/>.

4.3. Canada asks interested parties to visit <https://BuyandSell.gc.ca/> regularly to check for changes, if any.

5. Closing Date for the Notification

5.1. The closing date for this notification is currently planned for 10 June, 2022.

ANNEX A – MRFAF Information and Questions

1. MRFAF Information

1.1. Performance: The MRFAF is intended to:

- a) operate in four modes: Point Detonating Super Quick (PD-SQ), PD-Delay, Time, and Proximity;
- b) have a mode switch selectable without the use of specialized tools;
- c) be set manually or with an inductive fuze setter in less than 20 seconds;
- d) have a means to indicate the fuze setting;
- e) have a means to indicate the battery power strength;
- f) retain fuze setting for at least 5 hours, after which it resets itself to PD-SQ mode;
- g) have sufficient battery life to endure at least 15 days from the initial set date;
- h) function within 0.17 milliseconds after impact in PD-SQ mode;
- i) offer variable delay settings between 2 and 50 milliseconds in PD-Delay mode;
- j) be settable from at least 1.0 to 199.9 seconds in 1/10 second increments or smaller in Time mode;
- k) be settable to become active after firing from at least 2 to 199 seconds in 1 second increment or smaller in Proximity mode;
- l) have a PD-SQ backup that functions automatically on impact in Proximity mode;
- m) function at a height of burst between 7 to 15 meters in Proximity mode;
- n) be able to initiate a modern Insensitive Munition (IM) main charge explosive;
- o) have an independent self-destruct mechanism that is activated at least 200 seconds after the MRFAF is armed;
- p) be settable with inductive fuze setters that are STANAG 4369 compliant, in particular the M1155 PIAFS, the M1155A1 EPIAFS, and the AD953A1;
- q) be compatible with all High Explosive 105mm and 155mm artillery bursting type projective utilized by the CAF, in particular the 105mm M1, 155mm M107, M795, and M549; and
- r) be compatible with the launch parameters of all artillery gun propellant systems utilized by the CAF, in particular the M4A2, MACS 231, and MACS 232A1.

1.2. Safety, Suitability, and Environmental: The MRFAF is intended to:

- a) have a mechanical safe to arm distance of 100 meters for 105mm ammunition and 150 meters for 155mm ammunition;
- b) have an electronic safety of minimum 1 second for PD-SQ and PD-Delay modes and minimum 3 seconds for Time and Proximity modes;
- c) have a booster explosive that exhibits a lower vulnerability in IM tests than Composition A3 or A5;
- d) be resistant to unintended functioning by natural, friendly, or hostile electromagnetic effects;
- e) revert to the PD-SQ mode automatically in severe electronic warfare environments;
- f) not interfere with in-service electronic equipment;
- g) have a minimum shelf life of 10 years;
- h) withstand exposure to the following substances without degradation of its capabilities: diesel, insect repellent, weapon cleaning materials, alcohol, ethanol, isopropyl, camouflage creams, decontaminants, salt water spray, and body oils;
- i) have all exposed metal parts finished for corrosion resistance;
- j) be able to be stored within the temperature limits of -51°C to +71°C;
- k) be able to function within the temperature limits of -46°C to +63°C;
- l) have packaging qualified for ground (wheeled or track vehicles, train), air (helicopter or fixed wing aircraft), or sea transportation;
- m) have an approved Hazard Class and Compatibility Group from a National Competent Authority;
- n) have a packed configuration that does not exceed 20 lbs (9.1 kg) gross weight while containing a minimum of 8 MRFAF; and
- o) have a packed configuration designed to be lifted by one person.

2. Questions

2.1. Respondent Information.

- a) What is the name of your company and/or the company that you represent?
- b) What is the name of the Original Equipment Manufacturer (OEM) of your ammunition?
- c) What is an estimated unit cost of the MRFAF both with and without shipping?

2.2. Based on DND's procurement requirements:

- a) What is the typical lead time for your MRFAF?
- b) Is there a minimum order quantity for your MRFAF?
- c) Is there a minimum manufacturing lot run for your MRFAF?

2.3. Technical.

- a) Does the MRFAF that you would propose meet all the specifications listed above in Annex A Section 1?
- b) If the MRFAF that you would propose does not meet all the specifications listed above in Annex A Section 1, which specifications does it not meet?
- c) What type, if any, official or certified documentation that could demonstrate the specifications could you provide for the MRFAF you would propose?

2.4. Qualification.

- a) Has some or all qualification testing been done for your current ammunition nature?
- b) To what extent / standard has the testing been done for this specific ammunition nature?
- c) Has your current ammunition nature been certified as Safe and Suitable for Service (S3) use by a NATO country?

2.5. Usage.

- a) Is your current ammunition nature currently in use by any NATO countries?

2.6. Production Capacity / Strength of Design.

- a) For how long has your current MRFAF design been in production?
- b) How many MRFAF (Rough Order Magnitude) have you produced thus far?
- c) Is your current MRFAF currently in production?
- d) If current production is not underway, how long would a start-up be in order to produce the MRFAF?
- e) How many more years do you plan on producing your current MRFAF?

3. MSP Considerations

- 3.1. The Munitions Supply Program (MSP) establishes a framework under which the Government of Canada sources ammunition and small arms for National Defence (DND) from unique domestic industrial facilities that have been designated as strategic sources of supply and centres of excellence. Further details on Canada's MSP can be found at <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/munitions-eng.html>.
- 3.2. Intellectual Property.
- a) Do you have legal access to the design(s) proposed and, if required or decided, are you in a position to broker access to those design(s) for the purpose of production in Canada under the MSP and for the sale to and use by the Canadian Government?
 - b) Would there be any possible issues with technology transfer for the MRFAF to be built in Canada (i.e. differing standards between Canada and other countries, electrical differences, etc.).
- 3.3. National Security and Industrial Secrets.
- a) To what extent is information and data transfer constrained (if at all) by matters of national security and/or protection of industrial secrets?
- 3.4. Munitions Supply Program (MSP).
- a) Would you or the OEM you represent be willing to have your MRFAF manufactured under license by one or more of Canada's Munitions Supply Program strategic partners?
 - b) If required or decided, what amount of workshare do you consider to be possible to achieve with MSP companies?
- 3.5. Based on a potential workshare with MSP strategic supply partners:
- a) What are the estimated Non-Recurring Engineering costs for:
 - 1) Royalties;
 - 2) Technology transfer;
 - 3) Licenses fees;
 - 4) Technical support;
 - 5) Training;
 - 6) Manufacturing equipment(s) and tooling;
 - 7) Technical data package (TDP); and
 - 8) Other considerations.

4. Other

- 4.1. Please provide any other information you may want to share regarding the above stated requirements and questions.