

The Department of National Defence: Director Nuclear Safety (D N Safe) has a requirement for the supply of a new mechanically cooled High Purity Germanium (HPGe) detector for performing gamma spectroscopy measurements in the field. This type of measurement is a non-destructive analysis that allows to quantify activity levels of gamma emitting radioactive isotopes. It will be a tool in the equipment used for decommissioning, characterization of radioactive waste and in support to Radioactive and Nuclear (RN) related emergency and security events. The purpose of this Advance Contract Award Notice (ACAN) is to signal the government's intention to award a contract for these goods to:

Gamble Technologies Limited  
Mississauga Distribution Facility  
6535 Millcreek Drive, Unit #71  
Mississauga, ON  
L5N 2M2

Before awarding a contract, however, the government would like to provide other suppliers with the opportunity to demonstrate that they are capable of satisfying the requirements set out in this Notice, by submitting a statement of capabilities during the 15 calendar day posting period.

If other potential suppliers submit a statement of capabilities during the 15 calendar day posting period that meet the requirements set out in the ACAN, the government will proceed to a full tendering process on either the government's electronic tendering service or through traditional means, in order to award the contract.

If no other supplier submits, on or before the closing date, a statement of capabilities meeting the requirements set out in the ACAN, a contract will be awarded to the pre-selected supplier.

## Background

The Department of National Defence: Director Nuclear Safety (D N Safe) has a requirement for the supply of quantity 1 (one) new mechanically cooled High Purity Germanium (HPGe) detector. The Ortec Detective X-N is used for performing gamma spectroscopy measurements in the field. This type of measurement is a non-destructive analysis that allows to quantify activity levels of gamma emitting radioactive isotopes. The equipment is used to identify and quantify nuclear substances. This equipment will weigh under 8 kg and have its own transportation case. It will be used as a field instrument for quality control and emergency measurements.

The equipment is to be delivered within one hundred and twenty (120) days after contract award.

The estimated value of the contract is \$222,750.00 (HST extra).

## Minimum Essential Requirements

Any interested supplier must demonstrate by way of a statement of capabilities that its product/equipment/system (as appropriate) meets the following requirements:

- (a) Coaxial construction High Purity Germanium with a relative efficiency (as defined in IEEE 325-1996) of at least 45%.
- (b) The energy resolution shall be better than 2.5 keV for the Full Width Half Maximum (FWHM) of the Co-60 1.33 MeV peak.
- (c) Neutron detection capability that doesn't rely on compressed He-3 and meet the ANSI N42.34 (2015) performances.
- (d) Mechanical cryostat and battery power for at least 7 hours of operation once cooled down.
- (e) The HPGe crystal and cryostat design must be such that it is not required to wait for a thermal cycle if the HPGe crystal warm up above operating temperature.
- (f) Internal GPS.
- (g) Operating temperature range from -20°C to 50°C and relative humidity <95% non-condensing.
- (h) Ingress Protection (IP) 65, sealed against ingress of dust and water.
- (i) Support Wireless connectivity IEEE 802.11a/b/g with WPA and WPA2.
- (j) Onboard automatic identification algorithm that includes but not limited to the following isotopes: Ag-110m, Ar-41, Am-241 (shielded and unshielded), Be-7, Ba-133, Cd-109, Ce-144, Cm-244, Co-57, Co-60, Cr-51, Cs-134, Cs-137, Cu-64, Eu-152, Eu-154, Eu-155, Ga-67, Hg-203, Ho-166m, I-123, I-131, In-111, Ir-192, K-40, La-140, Lu-177, Mn-54, Mo-99, Na-22, Na-24, Nb-95, Nd-147, Pd-103, Po-210, Pu-239, Ra-226, Sb-125, Se-75, Sm-153, Sr-85/Kr-85, Tc-99m, Th-232, Tl-201, U-233, U-235, U-238, W-187, Xe-133, Xe-135, Y-88, Yb-169, Zn-65.
- (k) Allows saving spectrum in Ortec format (.spc) and in ANSI 42.42 (2016) format.
- (l) The device can be controlled by Ortec software GammaVision v7.0 and above and Isotopic v.4.1 and above.
- (m) The device endcap crystal allows container with a well of 9.6 cm of diameter (such as Ga-MA 538G beaker) to fit.
- (n) Power adapter(s) for 120 VAC and 12V DC.
- (o) Transportation case.
- (p) Weight less than 8 kg.

## Justification for the Pre-Selected Supplier

Gamble Technologies Limited is the only supplier known to DND who is capable of meeting the requirement. Gamble is the sole distributor and only approved and authorized reseller to sell and support in Canada the equipment built by the OEM, Ortec. Use of Ortec equipment by Government of Canada with ongoing collaborators, and selection of the industry standard equipment provides additional significant benefits in terms of common scientific products, interchangeability and interoperability investments in instrument setup and troubleshooting. This ACAN is subject to the following:

Government Contracts Regulations (GCRs) – 6 (d) of the Government Contract Regulations is being invoked in this procurement as only one person or firm is capable of performing the contract.

Subject to CFTA – Paragraph 2 Item ii. If the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute goods or services exist for any of the following reasons: the protection of patents, copyrights, or other exclusive rights.

Subject to NAFTA – Article 1016 Item 2b. Where for works of art, or for reasons connected with the protection of patents, copyrights or other exclusive rights, or proprietary information or where there is an absence of competition for technical reasons and the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute exists.

Subject to WTO – Article XV.1 (b) of the World Trade Agreement, Agreement on Government Procurement is being invoked in this procurement, for reasons connected with the protection of exclusive rights.

There is no Intellectual Property arising out of the proposed contract.

Suppliers who consider themselves fully qualified and available to meet the specified requirements may submit a statement of capabilities in writing to the Contracting Authority 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 closing date and time for accepting statements of capabilities is 21-September-2018 at 14:00 p.m. EST.

Inquiries and statements of capabilities are to be directed to:

Lionel James  
Procurement Officer  
Director Services Contracting | National Defence  
Department of National Defence / Government of Canada  
Email: [lionel.james@forces.gc.ca](mailto:lionel.james@forces.gc.ca)

## Policy Information

### Government Contracts Regulations (GCRs) –

6 (d) of the Government Contract Regulations is being invoked in this procurement as only one person or firm is capable of performing the contract.

### Subject to CFTA –

Paragraph 2 Item ii. If the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute goods or services exist for any of the following reasons:

ii. the protection of patents, copyrights, or other exclusive rights.

### Subject to NAFTA –

Article 1016 Item 2b. Where for works of art, or for reasons connected with the protection of patents, copyrights or other exclusive rights, or proprietary information or where there is an absence of competition for technical reasons and the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute exists.

### Subject to WTO –

Article XV.1 (b) of the World Trade Agreement, Agreement on Government Procurement is being invoked in this procurement, for reasons connected with the protection of exclusive rights.