

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**
11 Laurier St./ 11 rue, Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet MICRO COMBUSTION CALORIMETER	
Solicitation No. - N° de l'invitation W8486-151932/A	Date 2014-10-28
Client Reference No. - N° de référence du client W8486-151932	
GETS Reference No. - N° de référence de SEAG PW-\$\$PV-916-66012	
File No. - N° de dossier pv916.W8486-151932	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-12-08	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes	
Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Emond, Linda A.	Buyer Id - Id de l'acheteur pv916
Telephone No. - N° de téléphone (819) 956-4014 ()	FAX No. - N° de FAX (819) 956-3814
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

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Scientific, Medical and Photographic Division / Division de
l'équipement scientifique, des produits photographiques et
pharmaceutiques
11 Laurier St./ 11 rue, Laurier
6B1, Place du Portage
Gatineau, Québec K1A 0S5

Delivery Required - Livraison exigée See Herein	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

Solicitation No. - N° de l'invitation

W8486-151932/A

Amd. No. - N° de la modif.

File No. - N° du dossier

pv916W8486-151932

Buyer ID - Id de l'acheteur

pv916

CCC No./N° CCC - FMS No/ N° VME

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TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION

1. Security Requirement
2. Requirement
3. Debriefings
4. Trade Agreements

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions
2. Submission of Bids
3. Enquiries - Bid Solicitation
4. Applicable Laws

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures
2. Basis of Selection

PART 5 - CERTIFICATIONS

1. Certifications Required Precedent to Contract Award

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement
2. Requirement
3. Standard Clauses and Conditions
4. Term of Contract
5. Authorities
6. Payment
7. Invoicing Instructions
8. Certifications
9. Applicable Laws
10. Priority of Documents
11. SACC Manual Clauses
12. Shipping Instructions - Delivery at Destination

List of Annexes:

- | | |
|---------|--------------------------------|
| Annex A | Requirement / Basis of payment |
| Annex B | Mandatory Specifications |
| Annex C | Complete List of Directors |

Micro Combustion Calorimeter

PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with this bid solicitation.

2. Requirement

The requirement is detailed under the "Annex A".

3. Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

4. Trade Agreements

"The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT)."

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2014-06-26) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days
Insert: ninety (90) days

1.1 SACC Manual Clauses

B1000T

Condition of Material

2014-06-26

2. Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

4. Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of Ontario, Canada.

The Bidder may, at its discretion, substitute the applicable laws of a Canadian province or territory of its choice without affecting the validity of its bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of its choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidder

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (two (2) copies)
Section II: Financial Bid (one (1) copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement. (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Offerors should follow the format instructions described below in the preparation of their offer:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content;
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders; and
- 3) use a numbering system that corresponds to that of the Request for Standing Offers.

1.1 Section I: Technical Bid

The following applies to the Requirement and bidders must provide the following information in the bid where applicable:

1.1.1 Installation / Commissioning

On-site installation / Commissioning must be provided and be carried out by a qualified service technician.

The system must be fully installed, functional and must be operational and ready to be used within 8 weeks of contract award and no later than 15 March 2015

State your best installation schedule. Installation will be carried out within _____ calendar days of delivery and be completed within _____ calendar days.

1.1.2 Training

On-site user training must be provided for up to (5) five users. All costs associated with the on-site training must be included in the price. See Annex B for more details.

On-site training will be completed within _____ calendar days of installation.

Provide complete details of training e.g. duration, scope, etc.,

1.1.3 Service

Purchase of the system must include: technical support; technical phone support; support via the Internet; and support via a fax-back document system. Service cost must be included in the price.

Response for service must be within 24 hours or less.

Also, provide the following with your bid (for information purposes only):

- a) Location of available service facilities (after sales service and repair). List the service facilities closest to the destination.

- b) Locations of available replacement parts from consumables to major components.

- c) Response time re: service calls, and escalation schedule, i.e. (how many days with no resolution to a problem until a more experienced person is called in, and from which location).

- d) List the frequency of routine maintenance visits provided by a qualified service technician during the warranty period, if applicable and included in the price.

1.1.4 Product(s) Offered

The Bidder must indicate the make and model number of the products offered (identify specific components which make up the system):

Name of Manufacturer: _____

Model/Part Number: _____

Literature attached: Yes () No ()

1.1.5 Point of Manufacture/Shipping

The Bidder must state the point of manufacture/shipping of goods or where service is to be performed:

Location: _____

Postal Code: _____

1.1.6 Delivery

While delivery must be no later than March 15, 2015, the best delivery that could be offered by the Bidder is _____.

1.1.7 Software Upgrades

The Bidder must provide all software updates and new releases to the purchaser for a period of one year following the acceptance, at no additional cost.

Note: The word "updates" means all enhancements, extensions or other modifications to the software. The word "releases" means enhancements or modifications to the software or new modules or supplementary modules that function in conjunction with the software, that represent the next generation of software, and which the Contractor has decided to make available to its customers usually for an additional charge.

1.1.8 Contacts

Bidders are requested to provide the following: Information pertaining to Article 5.3 Contractor Representatives under Part 6, Resulting Contract Clauses.

1.2 Section II: Financial Bid

The bidder must quote a firm lot price all inclusive of supply, installation, training /commissioning and manuals, DDP (Gatineau, Quebec), the total amount of applicable taxes must be shown separately. Freight charges to destination and all applicable Customs duties and Excise taxes must be included.

1.2.1 Exchange Rate Fluctuation

C3011T	Exchange Rate Fluctuation	2013-11-06
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1.3 Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

All proposals submitted must be completed in full and provide all of the information requested in the Request for Proposal (RFP) package to enable a full and complete evaluation. If the requirement is not addressed in the bidder's proposal, the proposal will be considered incomplete or non-responsive and will be rejected. The onus is on the bidder to provide all the information necessary to ensure a complete and accurate assessment.

Confirm that you have read and understood by checking the: Yes _____

Factors for Evaluation

1. **PRICING BASIS (MANDATORY):** Prices must be firm, DDP Gatineau, Quebec, Delivered Duty Paid.
2. **ABILITY TO MEET THE TECHNICAL REQUIREMENT (MANDATORY):**
 - a) **For Items Defined by Specifications:**

The bidder is requested to cross reference the mandatory technical criteria contained herein to their supporting technical documentation.
 - b) **Provision of Supporting Technical Documentation:**

Supporting technical documentation for the stores offered must be provided with the bid at time of bid closing.

Technical brochures or technical data **MUST** be provided to verify compliancy to the technical mandatory specifications.

Included: **Yes:** _____

3. **COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS REQUEST FOR PROPOSAL (MANDATORY)**
4. Please note that the requirements of the Federal Contractors Program for Employment Equity may apply - (see Part 5).
5. The Bidder must provide proof of certification of CSA or ULC standard (photocopy of certificate will suffice)

1.1.1 Mandatory Technical Criteria

As per Annex B

1.2 Financial Evaluation

Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, DDP (*Gatineau, Quebec*) Incoterms® 2000, Canadian customs duties and excise taxes included.

Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.

2. Basis of Selection

A0031T Basis of Selection -
Mandatory Technical Criteria Only

2010-08-16

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated information to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority may render the bid non-responsive or constitute a default under the Contract.

1. Certifications Required Precedent to Contract Award

1.1 Integrity Provisions - Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions 2003. The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

1.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Employment and Social Development Canada (ESDC) - Labour's website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

PART 6 - RESULTING CONTRACT

1. Security Requirement

2. Requirement

2.1 Requirement

The Contractor must provide the items detailed under the "Requirement" at Annex "A".

2.2 Installation/ Commissioning

The system must be fully installed, functional and must be operational and ready to be used within 8 weeks of contract award and no later than 15 March 2015

On-site installation must be provided and be carried out by a qualified service technician.

2.3 Manuals

The Contractor must provide operating, maintenance and troubleshooting manuals and media for complete system as well as spare parts list in electronic format as a minimum.

2.4 Training

On-site user training must be provided for up to (5) five users.

2.5 Software Upgrades

The contractor must provide all software updates and new releases to the purchaser for a period of one (1) year following the acceptance, at no additional cost.

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2014-06-26) General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

3.2 Supplemental General Conditions

4001 (2010-08-16) Hardware Purchase, Lease and Maintenance,
4003 (2010-08-16) Licensed Software, and
4004 (2013-04-25) Maintenance and Support Services for Licensed Software,
apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before _____ (to be filled in only at contract award).

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:
Linda Emond
Public Works and Government Services Canada
Acquisitions Branch
Commercial Consumer Products Directorate
11 Laurier Street, 6A2, Phase III
Place du Portage, Gatineau, Quebec, K1A 0S5
Telephone: (819) 956-4014
Facsimile: (819) 956-3814
E-mail address: linda.emond@pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

5.2 Technical Authority

The Technical Authority for the Contract is:

Name: _____
Telephone: () _____
Facsimile: () _____
E-mail address: _____

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

5.3 DND Procurement Authority *(to be filled in only at contract award)*

The DND Procurement Authority for the Contract is:

Name: _____
Telephone: () _____

Facsimile: (____) _____
E-mail address: _____

The DND / NRC Procurement Authority is responsible for the DND /NRC contract management and for the authorization of all work against this contract.

5.4 Contractor's Representative (*fill in*)

The telephone number of the person responsible for:

General enquiries
Name: _____
Telephone No. _____
Facsimile No. _____
E-mail address: _____

Delivery Follow-up
Name: _____
Telephone No. _____
Facsimile No. _____
E-mail address: _____

6. Payment

6.1 Basis of Payment - Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price, as specified in Annex "A" for a cost of \$ _____ (**to be filled in only at contract award**). Customs duties are included, and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.2 SACC Manual Clauses

C2000C	Taxes - Foreign-Based Contractor	2007-11-30
C2605C	Canadian Customs Duty and Sales Tax	2008-05-12
C2608C	Canadian Customs Documentation	2012-07-06
C2610C	Customs Duty - DND - Importer	2007-11-30
H1000C	Single Payment	2008-05-12

7. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - (a) The original and two (2) copies must be forwarded to the following address for certification and payment.

Department of National defence
101 Colonel By Drive
Ottawa, Ontario K1A 0K2
Attn: Maria Lynn QETE 5-4
Tel: 819-997-2181

- (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
- (c) one (1) copy must be forwarded to the consignee.
- (d) To facilitate the payment process, it is important that the Contractor quote the contract number on all the invoices, shipping bills and packing slips. Failure to do so will delay payment and the date used for calculating interest on overdue accounts.

8. Certifications

8.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to, provide the associated information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of Ontario.

10. Priority of Documents

If there is a discrepancy between the wordings of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) 2010A (2014-06-26) General Conditions - Goods (Medium Complexity);
- (c) Supplemental General Conditions;
 - 4001 (2010-08-16) Hardware Purchase, Lease and Maintenance,
 - 4003 (2010-08-16) Licensed Software, and
 - 4004 (2013-04-25) Maintenance and Support Services for Licensed Software, apply to and form part of the Contract
- (d) Annex A, Requirement/Basis of Payment;
- (e) Annex B Mandatory Specifications
- (f) the Contractor's bid dated _____ (*insert date of bid*)

11. SACC Manual clause

B1501C	Electrical Equipment	2006-06-16
A9062C	Canadian Forces Site Regulations	2011-05-16
A2000C	Foreign Nationals (Canadian Contractor)	2006-06-16
A2001C	Foreign Nationals (Foreign Contractor)	2006-06-16
D5545C	Delivery, Inspection and Acceptance	2010-08-16

12. Shipping Instructions - Delivery at Destination

1. Goods must be consigned to the destination specified in the Contract and delivered:

Delivered Duty Paid (DDP) Gatineau, Quebec Incoterms 2000 for shipments from a commercial contractor.

2. The Contractor will be responsible for all delivery charges, administration, costs and risk of transport and customs clearance, including the payment of customs duties and taxes.

- 12.1 The Contractor must prepare item number (1) one for delivery in accordance with the latest issue of the Canadian Forces Packaging Specification *D-LM-008-036/SF-000*, DND Minimum Requirements for Manufacturer's Standard Pack.
-

Solicitation No. - N° de l'invitation
W8486-151932/A
Client Ref. No. - N° de réf. du client
W8486-151932

Amd. No. - N° de la modif.
File No. - N° du dossier
Pv916 W8486-151932

Buyer ID - Id de l'acheteur
Pv916
CCC No./N° CCC - FMS No/N° VME

ANNEX A

REQUIREMENT / BASIS OF PAYMENT

Micro Combustion Calorimeter

Quality Engineering Test Establishment (QETE) Div. National Defence has a requirement to purchase a Micro combustion calorimeter in accordance with the mandatory specifications detailed in the Annex B with user training, installation, commission and operating maintenance are required, delivery is required by March 15, 2015 Delivery to Gatineau, Quebec.

Description	Firm Qty	Firm lot price
Micro combustion calorimeter with user training, installation, commission and operating maintenance in accordance with the mandatory specifications on Annex B.	1	\$ _____

If bidders quoted FCA (Freight Carrier) they must provide the following information:

Custom Duties
Excise Tax
Transportation Charge

ANNEX B

MANDATORY SPECIFICATIONS FOR MICRO COMBUSTION CALORIMETER

Vendors must cross reference the mandatory technical criteria in a concise format by using page, paragraph(s) & sub-paragraphs as applicable to their supporting technical documentation.

Microscale Combustion Calorimeter

- 1.0** The **Microscale Combustion Calorimeter** must be able to conduct testing in compliance with ASTM D7309, including the following outputs: heat release capacity, maximum specific heat release, heat release temperature, specific heat release, pyrolysis residue yield, specific heat of fuel gas combustion, net calorific value, maximum heat of combustion rate, combustion temperature and combustion residue yield. Heat release rate must be time resolved and must be displayed as a function of time or temperature.

Reference in Contractors Proposal: _____

- 2.0** **Specimen Chamber** The system must be capable of holding and heating samples in a continuous flow of purge gas.

Reference in Contractors Proposal: _____

- 3.0** **Temperature Controller**, must be capable of executing a temperature program that changes the specimen chamber temperature between ambient and 850°C at a rate which is constant to within 5% of the nominal value.

Reference in Contractors Proposal: _____

- 4.0** **Purging Mechanism** that must purge the specimen chamber with a constant flow of gas (nitrogen or nitrogen/oxygen) at a rate of 50-100 cm³/min with an accuracy of +/- 1%.

Reference in Contractors Proposal: _____

- 5.0** **Mass Flow Controllers** that must control oxygen gas in the range 0-50 cm³/min and nitrogen gas in the range 0-100 cm³/min with an accuracy of +/- 1% of full scale.

Reference in Contractors Proposal: _____

- 6.0** **Temperature Sensor** must be capable of determining the specimen temperature to +/- 0.5 °C.

Reference in Contractors Proposal: _____

- 7.0** **Mixing Chamber**. The Contractor must provide a system where the specimen gases and purge gases are mixed with sufficient oxygen to effect complete oxidation of the specimen gases in the combustion chamber.

Reference in Contractors Proposal: _____

8.0 Oxygen Input Mechanism The Contractor must provide a system that introduces oxygen into the mixing chamber at a constant flow rate of 0 -50 cm³/min such that the oxygen can be varied from 20-50% +/-0.1% by volume entering the combustion chamber.

Reference in Contractors Proposal: _____

9.0 Combustion Chamber The Contractor must provide a system that is capable of maintaining a constant temperature in the range of 800 - 1000 °C.

Reference in Contractors Proposal: _____

10.0 Inline Drier The Contractor must provide a system that is capable of removing moisture and acid gases from the combustion stream to a dew point of 0 °C. The solid desiccant must be of the indicating type for visual observation.

Reference in Contractors Proposal: _____

11.0 Flow Meter The Contractor must provide a system that is capable of measuring gas flow rates up to 200 cm³/min with a response time of <0.1 s, sensitivity of 0.1% of full scale, repeatability to +/- 0.2% of full scale and accuracy of +/- 1% of the full scale.

Reference in Contractors Proposal: _____

12.0 Oxygen Analyzer The Contractor must provide a system that is capable of measuring oxygen concentration in the range of 0 – 100% by volume with a response time of < 6 s for 90% deflection, a sensitivity of < 0.1% oxygen by volume and a linearity of +/- 1% of full scale at constant temperature and pressure.

Reference in Contractors Proposal: _____

13.0 Electrical Power Requirement and Plug. The system must be compatible with a North American power outlet of 115 V, 15 A.

Reference in Contractors Proposal: _____

Sample holders & accessories

14.0 12 specimen cups. The Contractor must provide a system where the specimen cups fit properly into specimen chamber and which can withstand chamber temperatures.

Reference in Contractors Proposal: _____

15.0 Spare Specimen Assembly

Reference in Contractors Proposal: _____

16.0 The Contractor must provide a system which includes the **tools** required for the normal operation of the apparatus and the changing of the sample holders. This may include but is not limited to items such as torque wrench and screwdriver etc.

Reference in Contractors Proposal: _____

- 17.0** Accessories must include 12 sample holders, tools and small supplies required for the normal maintenance and operation of the instrument. The contractor must provide (enough for one year supply) and include reference samples for the calibration/commissioning of the instrument.

Reference in Contractors Proposal: _____

- 18.0** The Contractor must provide the tools and reference sample, for the commissioning of the system.

Reference in Contractors Proposal: _____

Controller, printer and operating software

- 19.0** The Microscale Combustion Calorimeter must have its own controller, complete with all the required hardware (keyboard, pointer, interface cards, cables, screen, printer & related). The controller must have at least an Intel Core i7 processor, at least 8 GB DDR3, at least 1TB HDD and a monitor that is not less than 21 inches.

Reference in Contractors Proposal: _____

- 20.0** The controller must allow the full control of the settings & the operation of the system, the acquisition, storage / retrieval and treatment of experimental data.

Reference in Contractors Proposal: _____

- 21.0** The computer must have a processor, memory, hard disk drive, mouse and monitor that will fully support the software

Reference in Contractors Proposal: _____

- 22.0** The controller must include a fully licensed copy of Microsoft Windows 7.

Reference in Contractors Proposal: _____

- 23.0** The operating software must allow future method development & storage by the operators.

Reference in Contractors Proposal: _____

- 24.0** All provided proprietary software must be of the most current version and must be capable of being installed, running and being updated offline.

Reference in Contractors Proposal: _____

- 25.0** All proprietary software must be provided with a full end-user license not limited in time, include backup CD/DVD disk(s) and include updates for 2 years.

Reference in Contractors Proposal: _____

Installation/ Training/Manuals

26.0 The Contractor must install and perform specification testing of all system components, accessories and software listed above. This must be completed within 30 days of delivery and commissioning.

Reference in Contractors Proposal: _____

27.0 The Contractor must provide one (1) day on site successful specification testing and operation and maintenance training for a maximum of five (5) users in English and/or French.

Reference in Contractors Proposal: _____

28.0 The Contractor must provide operating, maintenance and troubleshooting manuals and media for complete system as well as spare parts list in electronic format as a minimum.

Reference in Contractors Proposal: _____

Pricing for information purpose only:

These are not part of the evaluation of the contract. The supplier can provide part number and a price list for the following options or accessories (if available). All of these shall be fully compatible and integrated with the system proposed.

Accessory/ Option	Part number	Price (Can\$)	Availability
Specimen cups			
Specimen assembly			

Solicitation No. - N° de l'invitation
W8486-151932/A
Client Ref. No. - N° de réf. du client
W8486-151932

Amd. No. - N° de la modif.
File No. - N° du dossier
Pv916 W8486-151932

Buyer ID - Id de l'acheteur
Pv916
CCC No./N° CCC - FMS No/N° VME

ANNEX C

**COMPLETE LIST OF DIRECTORS
(As per Standard Instructions, Clauses and Conditions Part 2)**

Name	Position
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____