

**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**

<b>Title - Sujet</b> FTIR-EXHUST GAS ANALYZER	
<b>Solicitation No. - N° de l'invitation</b> 31184-140819/A	<b>Date</b> 2014-10-07
<b>Client Reference No. - N° de référence du client</b> 31184-140819	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$PV-873-65854	
<b>File No. - N° de dossier</b> pv873.31184-140819	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-11-17</b>	<b>Time Zone Fuseau horaire</b> Eastern Standard Time EST
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Shannahan, Cassandra	<b>Buyer Id - Id de l'acheteur</b> pv873
<b>Telephone No. - N° de téléphone</b> (819) 956-3473 ( )	<b>FAX No. - N° de FAX</b> (819) 956-3814
<b>Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:</b> NATIONAL RESEARCH COUNCIL CANADA BLDG M-9 1200 MONTREAL RD OTTAWA Ontario K1A0R6 Canada	

**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

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

Solicitation No. - N° de l'invitation

31184-140819/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

pv873

Client Ref. No. - N° de réf. du client

31184-140819

File No. - N° du dossier

pv87331184-140819

CCC No./N° CCC - FMS No/ N° VME

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## **TITLE FTIR-Based Online Multi-Gas Analyzer**

### **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 Training**

One (1) day on-site user training must be provided for up to three (3) users. All costs associated with the on-site training must be included in the price.

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

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

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##### **1.1.2 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.

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- 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.
- \_\_\_\_\_
- \_\_\_\_\_

#### 1.1.3 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 ( ☐ )

#### 1.1.4 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: \_\_\_\_\_

#### 1.1.5 Delivery

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

#### 1.1.6 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.

#### 1.1.7 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, training and manuals; DDP (Ottawa, Ontario), 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 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).

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 (*Ottawa, Ontario*) 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](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.

## **PART 6 - RESULTING CONTRACT CLAUSES**

### **1. Security Requirement**

There is no security requirement applicable to this contract.

### **2. Requirement**

#### **2.1 Requirement**

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

#### **2.2 Manuals**

One complete set of user documentation in English must be supplied.

#### **2.3 Training**

One (1) day on-site user training must be provided for up to three (3) users.

## 2.4 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 Accounts Payable Contact:

Name: Susan Larocque  
Telephone: 613-993-1158  
E-mail address: susan.larocque@cnrc-nrc.gc.ca

## 5.4 Contractor's Representative

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(s), as specified in contract 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
C2608C	Canadian Customs Documentation	2012-07-06
C2602C	Customs Duty - NRC	2008-05-12
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 one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
  - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
  - (c) Invoices and order confirmations can be sent via e-mail to:  
  
frontdesk-22@nrc.gc.ca
  - (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) the 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.
- (c) 2010A (2014-06-26) General Conditions - Goods (Medium Complexity);
- (d) Requirement;
- (e) Annex A Mandatory Specifications FTIR Based Online Multi-Gas Analyzer;
- (f) the Contractor's bid dated \_\_\_\_\_ (*insert date of bid*)

#### 11. SACC Manual clause

B1501C	Electrical Equipment	2006-06-16
A9068C	Government Site Regulations	2010-01-11
A2000C	Foreign Nationals (Canadian Contractor)	2006-06-16
A2001C	Foreign Nationals (Foreign Contractor)	2006-06-16

#### 12. Shipping Instructions - Delivery at

1. Goods must be consigned to the destination specified in the Contract and delivered:  
  
Delivered Duty Paid (DDP) Ottawa, Ontario 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.

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Buyer ID - Id de l'acheteur  
Pv873  
CCC No./N° CCC - FMS No/N° VME

## ANNEX A

The National Research Council (NRC) has a requirement for the supply and training of one (1) a Fourier transfer infrared (FTIR) based online multi-gas analyzer for analysis of emissions of internal combustion engines fuelled with diesel, natural gas and syngas. Delivery to Ottawa, ON and is requested on or before March 31, 2015.

Description	Firm Qty	Firm lot price
Fourier transfer infrared (FTIR) based online multi-gas analyzer for analysis of emissions of internal combustion engines fuelled with diesel, natural gas and syngas. In Accordance with the mandatory specification on Annex B. training must be included.	1	\$ _____

### **For Foreign Contractor Only**

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

Custom Duties  
Excise Tax  
Transportation Charge

## ANNEX B

### MANDATORY SPECIFICATIONS for FTIR Based On-line Multi-Gas Analyzer

**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.**

The FTIR analyzer and the systems must meet the following requirements:

#### 1. Speed and resolution

- 1) Scan speed:  $\geq 1$  scan/second (1Hz)

Reference in Contractors Proposal: \_\_\_\_\_

- 2) Resolution:  $0.5 \text{ cm}^{-1}$

Reference in Contractors Proposal: \_\_\_\_\_

#### 2. Analyze range and capability

- 1) Analyze range: ppb ~ 100% full scale

Reference in Contractors Proposal: \_\_\_\_\_

- 2) With capability to measure mixture with moisture up to 30%

Reference in Contractors Proposal: \_\_\_\_\_

- 3) Sample flow rate: up to  $2 \sim 5 \text{ L/min}$

Reference in Contractors Proposal: \_\_\_\_\_

- 4) With the capability to measure  $20 \sim 30 +$  species simultaneously, especially following gases:

- A)  $\text{CO}_2$  (~%)

Reference in Contractors Proposal: \_\_\_\_\_

- B)  $\text{CO}$  (100 ppb ~ thousands ppm)

Reference in Contractors Proposal: \_\_\_\_\_

- C)  $\text{CH}_4$  (0 ~ 2%)

Reference in Contractors Proposal: \_\_\_\_\_



D) NO (for general internal combustion engine applications), NO<sub>2</sub> (for general internal combustion engine applications)

Reference in Contractors Proposal: \_\_\_\_\_

E) N<sub>2</sub>O (for general internal combustion engine applications)

Reference in Contractors Proposal: \_\_\_\_\_

F) Formaldehyde (ppb ~ ppm)

Reference in Contractors Proposal: \_\_\_\_\_

G) Ammonia (ppb ~ ppm)

Reference in Contractors Proposal: \_\_\_\_\_

H) Benzene (for general internal combustion engine applications)

Reference in Contractors Proposal: \_\_\_\_\_

I) Xylenes (for general internal combustion engine applications)

Reference in Contractors Proposal: \_\_\_\_\_

J) Ethane (for general internal combustion engine and natural gas applications)

Reference in Contractors Proposal: \_\_\_\_\_

K) Propane (for general internal combustion engine and natural gas applications)

Reference in Contractors Proposal: \_\_\_\_\_

L) Butane (for general internal combustion engine and natural gas applications)

Reference in Contractors Proposal: \_\_\_\_\_

M) Other gases for internal combustion engine and natural gas applications

Reference in Contractors Proposal: \_\_\_\_\_

**3. Full combustion calibration must be supplied. A full gas library must be provided with the analyzer**

Reference in Contractors Proposal: \_\_\_\_\_

**4. The analyzer must allow to add new species that has not been included in the existing library**

Reference in Contractors Proposal: \_\_\_\_\_

**5. Operation condition**

18 ~ 35 °C, around atmosphere pressure

Reference in Contractors Proposal: \_\_\_\_\_

**6. Size**

The FTIR must fit 19" rack enclosure

Reference in Contractors Proposal: \_\_\_\_\_

**7. Output**

1) Excel

Reference in Contractors Proposal: \_\_\_\_\_

2) Interface with lab view (serial communication for data acquisition, and/or TCP/IP)

Reference in Contractors Proposal: \_\_\_\_\_

**8. Must include a heated portable sampling pump system with a heated line (35" plus or minus 6")**

This must include pump, heated line (35" plus or minus 6") and heater controller

Reference in Contractors Proposal: \_\_\_\_\_

**9. Include a high speed processor computer with required operating and analysis software**

1) The software CD must also be included

Reference in Contractors Proposal: \_\_\_\_\_

2) The software must be capable of doing quantitative error estimates for each compound

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Pv873-31184-140819

Buyer ID - Id de 'acheteur  
Pv873  
CCC No./N° CCC - FMS No/N° VME

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Reference in Contractors Proposal: \_\_\_\_\_

**10. The voltage for the equipment should be: 120 VAC**

Reference in Contractors Proposal: \_\_\_\_\_

Solicitation No. - N° de l'invitation  
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Client Ref. No. - N° de réf. du client  
31184-140819

Amd. No. - N° de la modif.  
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Pv873-31184-140819

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

**ANNEX B**

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

Name	Position
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<hr/>	<hr/>
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