

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**
Public Works and Government Services Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave. Jaspe
5th floor/5e étage
Edmonton
Alberta
T5J 1S6
Bid Fax: (780) 497-3510

**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 GC Mass Spectrometer | |
| Solicitation No. - N° de l'invitation K4E21-150038/A | Date 2015-10-23 |
| Client Reference No. - N° de référence du client K4E21-150038 | |
| GETS Reference No. - N° de référence de SEAG PW-\$EDM-017-10602 | |
| File No. - N° de dossier EDM-5-38199 (017) | CCC No./N° CCC - FMS No./N° VME |
| Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-12-07 | Time Zone Fuseau horaire Mountain Standard Time MST |
| 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: Logan, Elizabeth | Buyer Id - Id de l'acheteur edm017 |
| Telephone No. - N° de téléphone (780) 497-3956 () | FAX No. - N° de FAX (780) 497-3510 |
| Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF THE ENVIRONMENT ADMINISTRATION 9250 - 49 STREET NW EDMONTON Alberta T6B1K5 Canada | |

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

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

| | |
|--|--|
| 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 |

Issuing Office - Bureau de distribution

Public Works and Government Services Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave Jasper
5th floor/5e étage
Edmonton
Alberta
T5J 1S6

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EDM-5-

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PART 1 - GENERAL INFORMATION

1.1 Statement of Requirement

This requirement is detailed under Article 2 of the resulting contract clauses.

1.2 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 from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.3 Trade Agreements

The requirement is subject to the provisions of the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT).

PART 2 - BIDDER INSTRUCTIONS

2.1 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 (2015-07-03) Standard Instructions - Goods or Services - Competitive Requirements*, are incorporated by reference into and form part of the bid solicitation.

2.1.1 SACC Manual Clauses

B1000T (2014-06-26) Condition of Material - Bid

2.2 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.

2.3 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 question(s) 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.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Alberta

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

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

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

Section I: Technical Bid (1 hard copy)

Section II: Financial Bid (1 hard copy)

Section III: Certifications (1 hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft 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:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

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) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Bidders should:

- 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; and
- 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.

Section I: Technical Bid

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

3.1.1 Exchange Rate Fluctuation

C3011T (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**4.1 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..

4.1.1 Technical Evaluation**4.1.1.1 Mandatory Technical Criteria**

See Annex A, MANDATORY SPECIFICATIONS

4.1.2 Financial Evaluation

Bidders must submit their financial bid in Canadian Funds in accordance with the Basis of Payment, with their bid at time of bid closing

4.1.3 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

- 4.1.4 The evaluated price will be calculated using the Bidder's firm unit prices as provided in Annex B, multiplied by the total quantity for each line item. The evaluated price will be the total aggregate price of the extended prices for all line items.

4.2 Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the highest point rating based on meeting all Mandatory Performance Specifications and achieving the highest technical score and the lowest financial score will be recommended for award of a contract.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional 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 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 will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Declaration of Convicted Offences

As applicable, pursuant to subsection Declaration of Convicted Offences of section 01 of the Standard Instructions, the Bidder must provide with its bid, a completed [Declaration Form \(http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html\)](http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – List of Names

Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder.

Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).

Bidders bidding as societies, firms or partnerships do not need to provide lists of names.

5.2.2 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.1 Security Requirements

6.1.1 There is no security requirement applicable to this Contract.

6.2 Statement of Requirement

Environment Canada (Prairie & Northern Laboratory for Environmental Testing (PNLET) in Edmonton) has a requirement for the purchase of a state-of-the-art Gas Chromatograph Triple Quadrupole Mass Spectrometer (GC-MS/MS) system. The GC-MS/MS system is required for the quantitative and qualitative analyses of a wide variety of trace level environmental organic compounds and as a forensic analysis tool for the enforcement of Canadian environmental regulations under the Canadian Environmental Protection Act (CEPA), Fisheries Act and other related acts/regulations. The system will also be required for new method development and other environmental research projects. Delivery is to be completed no later than March 24, 2016.

6.3 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) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

[2010A](#) (2015-09-03), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Period of the Contract

6.4.1 Delivery Date

All the deliverables must be received on or before March 24, 2016.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Elizabeth Logan
Title: Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Directorate: Western Region
Address: ATB Place, North Tower
5th Floor – 10025 Jasper Avenue
Edmonton, AB T5J 1S6

Telephone: 780- 497-3956
Facsimile: 780- 497- 3510
E-mail address: elizabeth.logan@pwgsc-tpsgc.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.

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6.5.2 Project Authority

The Project Authority for the Contract is: (will be inserted at contract award)

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone : _____

Facsimile: _____

E-mail address: _____

The Project Authority 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 Project Authority, however the Project 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.

6.5.3 Contractor's Representative (to be completed by bidder)

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone: _____ - _____ - _____

Facsimile: _____ - _____ - _____

E-mail address: _____

6.6 Payment

6.6.1 Basis of Payment - Firm Price, Firm Unit Price(s) or Firm Lot Price(s)

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit price(s), as specified in Annex B for a cost of \$ _____ (amount to be inserted 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.

6.6.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

6.6.3 Single Payment

SACC Manual clause H1000C (2008-05-12) Single Payment

6.6.4 SACC Manual Clauses

C2000C (2007-11-30), Taxes - Foreign-based Contractor

C2002C (2010-01-11), Duties and Taxes - Foreign-based Contractor - State of California

C2605C (2008-05-12), Canadian Customs Duties and Sales Tax - Foreign-based Contractor

*C5201C (2008-05-12), Prepaid Transportation Costs***6.7 Invoicing Instructions**

6.7.1 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.

6.7.2 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

6.8 Certifications**6.8.1 Compliance**

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional 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 additional 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.

6.9 Applicable Laws

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

6.10 Priority of Documents

If there is a discrepancy between the wording 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 general conditions 2010A (2015-09-03) - Goods (Medium Complexity);
- (c) Annex A, Statement of Requirement;
- (d) Annex B, Basis of Payment;
- (e) the Contractor's bid dated _____ (to be completed by bidder)

6.11 SACC Manual Clauses

SACC Manual Clause B1501C (2006-06-16), Electrical Equipment
SACC Manual Clause B7500C (2006-06-16), Excess Goods

6.12 Insurance

SACC Manual Clause G1005C (2008-05-12) Insurance

ANNEX A

REQUIREMENT

Gas Chromatograph Mass Spectrometer (GC-MS/MS) System

1. General

Environment Canada (Prairie & Northern Laboratory for Environmental Testing (PNLET) in Edmonton) has a requirement for the purchase of a state-of-the-art Gas Chromatograph Triple Quadrupole Mass Spectrometer (GC-MS/MS) system. The GC-MS/MS system is required for the quantitative and qualitative analyses of a wide variety of trace level environmental organic compounds and as a forensic analysis tool for the enforcement of Canadian environmental regulations under the Canadian Environmental Protection Act (CEPA), Fisheries Act and other related acts/regulations. The system will also be required for new method development and other environmental research projects.

The Organic Chemistry Section will require the instrument for analysis of toxic contaminants/pollutants (PCBs, pesticides, unknowns, petroleum product/by-products Alkylated PAHs and parent PAHs etc) for a number of CEPA regulations and Fisheries Act regulations at low levels and in difficult matrices for Enforcement purposes. Data produced from this instrument may be entered into court of law and used for the purposes of prosecution. The current GC-MS/MS system has reached the end of its service life and its software is not compliant with current Environment Canada's network security requirements.

The supplied Gas Chromatograph Triple Quadrupole Mass Spectrometer (GC-MS/MS) System shall include all parts/equipment/software necessary for analysis. It is incumbent upon the vendor to recommend a specific hardware configuration for a complete SYSTEM that is GUARANTEED suitable for the purposes specified. Vendors must submit documentation with their bid package that CLEARLY AND PRECISELY DEMONSTRATES how their system complies with the required specifications. The specifications given by a vendor must be demonstrated during installation at no extra cost.

The instrument system must meet all applicable ISO and CSA standards and be CSA approved.

The Gas Chromatograph Mass Spectrometer (GC-MS) System must include all parts, equipment, and software necessary for analysis and must be suitable for the purposes specified.

Delivery to and system installation is to be done at the Prairie and Northern Laboratory for Environmental Testing, Environment Canada, Edmonton, Alberta, on or before March 24, 2016.

A minimum of two (2) year on-site warranty including parts, labor and two preventive maintenance visits must be included.

All equipment must be New. Demo, used, refurbished or prototype models will not be considered.

Gas Chromatograph Triple Quadrupole Mass Spectrometer (GC-MS/MS) System

The Gas Chromatograph Triple Quadrupole Mass Spectrometer (GC-MS/MS) System must consist of, but not be limited to, the following major components, complete with all software/hardware and interfacing necessary to make a fully integrated system:

- I. Gas Chromatograph (GC)
- II. Autosampler (A/S)
- III. Triple Quadrupole Mass Spectrometer (QQQ)
- IV. Operating/Data System Software
- V. Operating/Data System Hardware

VI. System Implementation and Training

VII. Service & Support

Minimum Performance Specifications

Instruction to Bidders:

- Bidders must address each Minimum Performance Specification listed below, whether the product offered "Meets" or "Does Not Meet" and should provide supporting documentation for each item. Bidders should identify on their supporting documentation where the information can be found and, if applicable, "N/A" if documentation is not available.
- Bidders are requested to cross reference by item number on their supporting document where it clearly shows the specification meets or exceeds each minimum specification.

| Line | Description | Meets | Does Not meet | Reference |
|----------|---|-------|---------------|-----------|
| 1 | Gas Chromatograph (GC) | | | |
| 1.1 | The GC subsystem should be an integrated part of the total system and designated for unattended operation. It must be under complete control of the operating/data computer system. | | | |
| 1.2 | The GC must interface to the mass spectrometer via direct connection heated transfer line with the effluent of the GC going directly into the QQQ system. The heating of this connection must be controlled via microprocessor under computer control with temperature variable from ambient to 350°C. | | | |
| 1.3 | GC mainframe must be capable of supporting up to two (2) inlets and up to two (2) GC detectors. | | | |
| 1.4 | Oven size capable of accommodating up to two capillary columns. The capillary columns are 6.75" diameter x 1" depth. | | | |
| 1.5 | All temperature zones (inlets, oven, detectors, and transfer line to mass spectrometer) must be independently controlled via microprocessors under computer control. | | | |
| 1.6 | All gas pressures and flows to inlets and detectors electronically controlled via the computer system and must have built-in automatic shutoff of carrier gas if the inlet pressure drops significantly. | | | |
| 1.7 | GC must be equipped with keypad with display or touch screen for standalone operation. | | | |
| 1.8 | The GC system must be equipped with fast GC oven with ramp rates of at least 120°C/min., and oven cool down from 450°C to 50°C in four (4) minutes or less, program rates of 75 °C/min. or faster, minimum 5 temperature programming ramps, 60 minute or longer maximum run time, and built-in diagnostics which can be viewed via the data system. | | | |
| 1.9 | The GC must have the capability for liquid Nitrogen cryogenics for sub-ambient temperature operation of the GC column oven. | | | |
| 1.10 | GC must be capable of using either helium or hydrogen as a carrier gas. | | | |
| 1.11 | GC oven set point resolution of 1°C | | | |

| | | | | |
|----------|--|--|--|--|
| 1.12 | The GC method should be part of the full method along with Automatic Sampler parameters, Mass Spectrometer settings, Data Processing options and Reporting Options. | | | |
| 1.13 | Must be equipped with 2 split/splitless inlets. | | | |
| 1.14 | The GC inlets must be configured for split/splitless injection mode and suitable for all capillary columns (0.10 mm to 0.53 mm internal diameter). | | | |
| 1.15 | The GC inlets must have the ability to reduce gas consumption without compromising performance. | | | |
| 1.16 | The split/splitless inlets must be equipped with an electronic programmable pressure control (0.1 to 50 psi minimum), programmable split ratio control, adjustable septum purge, split/splitless solenoid control. | | | |
| 1.17 | The GC must be equipped with retention time locking function, which can calibrate column head pressure and retention time for a target analyte. | | | |
| 1.18 | Transfer Line temperature to MS must be capable of heating up to 350°C. | | | |
| 2 | GC Autosampler (A/S) | | | |
| 2.1 | Must be compatible with gas chromatograph and instrument control software. | | | |
| 2.2 | Must be equipped with one liquid autoinjector. | | | |
| 2.3 | Fully under software control with random access to vials in tray. | | | |
| 2.4 | Priority sample can be inserted into the sequence at any time. | | | |
| 2.5 | Pre- and post-injection rinsing of the syringe with two or more solvents. | | | |
| 2.6 | Capable of multiple injections per vial. | | | |
| 2.7 | Handles 2 ml vials with sample capacity of at least 80 vials. | | | |
| 2.8 | Handles standard syringe sizes of 5 µl and 10 µl. | | | |
| 2.9 | Injection volumes of 0.1 to 10 µl. Depending on the syringe size, for a 5µl syringe - range is 0.1 to 2.5µl, for a 10µl syringe - range is 0.2 to 5µl. | | | |
| 2.10 | The injector must be able to sample from a vial with micro-inserts. | | | |
| 3 | Triple Quadrupole Mass Spectrometer (QQQ) | | | |
| 3.1 | The MS Subsystem must be an integrated part of the total system and designated for unattended operation and dedicated to perform GC-MS/MS. | | | |
| 3.2 | The mass spectrometer must be of the triple quadrupole (QQQ) type. | | | |
| 3.3 | Supplied with appropriate sources for Electron Impact Ionization (EI) and Positive and Negative Chemical Ionization (PCI and NCI). | | | |
| 3.4 | Capable of MS (or Q1) scan and sim, MS/MS product and precursor ion scan, neutral loss scan and Selected Reaction Monitoring (SRM) or Multiple Reaction Monitoring (MRM) scan and scheduled SRM or MRM mode. | | | |
| 3.5 | Must include all vacuum pumps required for instrument operation. | | | |

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| 3.6 | Real-time vacuum pressure monitoring of mass spectrometer. | | | |
| 3.7 | The data acquisition function must allow for optimization of instrument parameters for an analyte. Must also allow for optimization of MS/MS voltages and collision energies for each analyte for up to 3 product ion per analyte. | | | |
| 3.8 | The system must have self diagnostics for monitoring system parameters with the ability to alert the user. | | | |
| 3.9 | The mass spectrometer must have a collision cell that uses argon gas for fragmentation and must not require a second gas (eg Helium) as a buffering agent. | | | |
| 3.10 | EI Scan: Capable of detecting 1 pg octafluoronaphthalene (OFN) or equivalent with at least 300:1 RMS S/N for m/z 272 scanning from m/z 50 to 300 Bidder must provide definition and conditions of achieving the specified sensitivity. | | | |
| 3.11 | EI MRM: Capable of detecting 100 fg octafluoronaphthalene (OFN) or equivalent with at least 7000:1 RMS S/N for transition 272>222 Bidder must provide definition and conditions of achieving the specified sensitivity. | | | |
| 3.12 | PCI MRM: Capable of detecting 0.1 pg benzophenone or equivalent with at least 50:1 RMS S/N for transition 183>105 Bidder must provide definition and conditions of achieving the specified sensitivity. | | | |
| 3.13 | NCI SIM: Capable of detecting 0.1 pg octafluoronaphthalene (OFN) or equivalent with at least 2000:1 RMS S/N for m/z 272. Bidder must provide definition and conditions of achieving the specified sensitivity. | | | |
| 3.14 | Ion source temperature independently heated up to 300 °C. | | | |
| 3.15 | Quadrupole temperature independently heated up to 150 °C. | | | |
| 3.16 | Electron Energy adjustable from 10 to 150 eV. | | | |
| 3.17 | Mass range: at least m/z 10 to 1000 u. | | | |
| 3.18 | Mass stability: at least 0.1 u over 24 hours. | | | |
| 3.19 | Scan speed: at least 6,000 u/sec. | | | |
| 3.20 | Transition speed: at least 800 MRMs/sec | | | |
| 3.21 | Minimum Dwell time: at least 0.5 msec | | | |
| 4 | Operating/Data Computer System Software | | | |
| 4.1 | The PC computer's operating system must be Microsoft Windows 7 Professional installed, 64 bit | | | |
| 4.2 | Networking compatibility: The PC computer must provide built-in networking compatible with TCP/IP protocols. | | | |
| 4.3 | Instrument control: Full control of instrumentation operation must include automated system start up and shut down, initial instrument calibration, parameter optimization, routine operations, calibration, data acquisition and processing, report generation, etc. | | | |
| 4.4 | Multi-tasking and able to acquire and process data in real time. | | | |

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| 4.5 | Full graphical instrument control window with the ability to display system parameters concurrently in real time. | | | |
| 4.6 | Internal diagnostics including error checking and a complete fault log. | | | |
| 4.7 | Various calibration modes including external and internal calibration. | | | |
| 4.8 | Multilevel linear and multilevel non-linear calibration capability. | | | |
| 4.9 | Comprehensive context sensitive help including hypertext links and index. | | | |
| 4.10 | Data processing: Full data processing and re-processing capabilities including control or editing of chromatogram integration, compound identification, calibration curves, quantitation and reporting parameters without the need to re-run samples. | | | |
| 4.11 | Sample sequence control: Ability to insert samples without stopping and restarting a previously started data acquisition sequence. | | | |
| 4.12 | Storage and recall of chromatograms and spectra. | | | |
| 4.13 | Capable of exporting data batches to standard data file types (.txt or .xls) that could be used to upload the data to a LIMS for archiving and final reporting. | | | |
| 4.14 | Data analysis software package must be capable of data review for single sample – multiple compounds, and multiple samples – single compound. This software must be able to filter and flag. | | | |
| 4.15 | Full data processing and reprocessing capabilities including control or editing of chromatogram integration, compound identification, calibration curves, quantitation and reporting parameters without the need to re-run samples. | | | |
| 4.16 | Instrument Tuning: software based automatic tuning function of MS system. | | | |
| 5 | Operating/Data Computer System Hardware | | | |
| 5.1 | The PC must feature at least an Intel quad-core i7 processor operating at 2.5 GHz or higher. | | | |
| 5.2 | Must have 16 GB (or greater) RAM. | | | |
| 5.3 | Must have 2 hard drives with a minimum of 500 GB for each hard drive. | | | |
| 5.4 | Must have a 16x (or greater) DVD-+r RW drive. | | | |
| 5.5 | The PC must be equipped with a minimum 27" LCD monitor that features a minimum resolution of 1280 x 1024 resolutions. | | | |
| 5.6 | Must include an uninterruptible power source (UPS) and all transformers required to connect the GC-MS/MS system to the building electrical grid. | | | |
| 5.7 | The UPS must fully control the GC-MS/MS and computer workstation for a minimum of 10 minutes and protect the system from power surges | | | |
| 5.8 | Must include a colour laser printer. | | | |
| 6 | System Implementation and Training | | | |
| 6.1 | The system must be CSA approved. | | | |

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| 6.2 | The system must include pre-installation site specifications to ensure site-readiness for installation. Specify SITE REQUIREMENTS including bench space, temperature operating range, electrical connections (voltages and numbers), gases required, and any special requirements (venting, etc.) | | | |
| 6.3 | Performance verification documentation after the system is installed is required before acceptance and payment. | | | |
| 6.4 | A minimum of 2 days on-site training. | | | |
| 6.5 | The system must be supplied with at least one set of consumable parts and tool kit necessary for maintaining operation. | | | |
| 6.6 | Provide CD/DVD with instrument or on-line continuing training. | | | |
| 7 | Service & Support | | | |
| 7.1 | Two year on-site parts and labor warranty/maintenance agreement on all components including two preventive maintenance visits for duration on warranty, on all components. Both on-site and telephone support must be included as standard. Pricing for additional warranty should be included as options. The warranty will begin on the DATE OF ACCEPTANCE of the system by the scientific authority. The DATE OF ACCEPTANCE will be determined (after installation) by the vendor demonstrating that the SYSTEM meets all of the user's requirements, and the manufacturer's own performance specifications. | | | |
| 7.2 | On-site service technicians must be available within 2 business days of a service request. Bidders must include in their bid, in writing, their guarantee of service response. | | | |
| 7.3 | Telephone support service calls must be responded to within one business day. Bidders must include in their bid, in writing, their guarantee of service response. | | | |
| 7.4 | Entire analytical system must consist of gas chromatograph, triple quadrupole mass spectrometer, autosampler, and software are manufactured and warranted by one vendor. | | | |

Make and Model Number of Product(s) Offered: _____

No Published Specifications

The bidder certifies that no published specification exists for any items identified above as "N/A" and that the product offered meets the minimum performance specifications request.

Bids which do not meet all of the Minimum Performance Specifications listed above will be deemed non-compliant and given no further consideration.

If upon delivery and acceptance, the product is found not to meet the Minimum Performance Specifications, the product will be returned at the Suppliers expense and the Contract terminated for default.

Solicitation No. - N° de l'invitation
K4E21-150038/A
Client Ref. No. - N° de réf. du client
K4E21-150038

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-5-38199

Buyer ID - Id de l'acheteur
EDM017
CCC No./N° CCC - FMS No./N° VME

**ANNEX B BASIS
OF PAYMENT**

Instruction to Bidders:

- Bidder is requested to complete the below table and submit completed table with their bid.
- Firm Unit Prices are FOB Destination.
- Firm Unit Prices do not include GST/HST. GST/HST will be added as a separate line item to any invoice issued as a result of a Contract.
- All Firm Unit Prices are in Canadian Dollars.

Delivery location:

Environment Canada – PNLET
5320 122 ST
NW
Edmonton, AB
T6H 3S5

| Description | QTY | Firm Lot Price |
|--|-----|----------------|
| Gas Chromatograph Mass Spectrometer System All hardware and software to meet the specifications outlined in "Annex A - Requirement" Inclusive of delivery, complete installation (including CSA Approval if necessary), and training at PNLET, Edmonton, AB | 1 | \$_____/ lot |