Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

Bid Receiving
PWGSC
33 City Centre Drive
Suite 480
Mississauga
Ontario
L5B 2N5
Bid Fax: (905) 615-2095

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/MS/MS

Solicitation No. - N° de l'invitation	**Date**
KW405-130522/A	2013-10-31

Client Reference No. - N° de référence du client
KW405-130522

GETS Reference No. - N° de référence de SEAG
PW-$TOR-002-6406

File No. - N° de dossier	**CCC No./N° CCC - FMS No./N° VME**
TOR-3-36132 (002)	

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM
on - le 2013-12-11

Time Zone
Fuseau horaire
Eastern Standard Time
EST

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☑ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à:	**Buyer Id - Id de l'acheteur**
Callahan, Kaye	tor002

Telephone No. - N° de téléphone	**FAX No. - N° de FAX**
(905) 615-2071 ( )	(905) 615-2060

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:
DEPARTMENT OF THE ENVIRONMENT
867 Lakeshore Rd.
BURLINGTON
Ontario
L7R4A6
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	**Delivery Offered - Livraison proposée**
2014-03-28	

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
Ontario Region
33 City Centre Drive
Suite 480
Mississauga
Ontario
L5B 2N5

Canada

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with this bid solicitation.

2. Requirement

Water Science and Technology Directorate of Environment Canada (Canada Centre for Inland Waters, located at Burlington, Ontario, Canada) requires two new automated Gas Chromatograph - Triple Quadrupole Mass Spectrometers (GC-MS/MS), with a proven track record, in accordance with Annex A.

Each system must include, at minimum, the following components: a gas chromatograph, a tandem mass spectrometer capable of operating in positive ion electron ionization (EI) mode and positive and negative chemical ionization mode, an uninterrupted power supply (UPS), split/splitless, multimode, and/or PTV inlet, an autosampler, a computer (with keyboard, dual LED monitors, colour laser printer and mouse) equipped with software capable of controlling all components of the GC-MS/MS systems. In addition, on site basic training, on site advanced training, and installation must be provided for each instrument.

Delivery, installation and on-site operator training must be completed by 28 March 2014.

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.

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 (2013-06-01) 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

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.

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

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 is eliminated, and the enquiry can be answered with copies 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 Ontario.

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

1. Bid Preparation Instructions

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

Section I: Technical Bid (2 hard copies)
Section II: Financial Bid (1 hard copy)
Section III: Certifications (1 hard 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). 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.

1.1 Exchange Rate Fluctuation

C3011T (2010-01-11), Exchange Rate Fluctuation

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

1.1.1 Mandatory Technical Criteria

See Annex “C”, Evaluation Criteria and Basis of Selection

1.1.2 Point Rated Technical Criteria

See Annex “C”, Evaluation Criteria and Basis of Selection

1.2 Financial Evaluation

See Annex “C”, Evaluation Criteria and Basis of Selection

2. Basis of Selection

2.1 See Annex “C”, Evaluation Criteria and Basis of Selection

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and documentation 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 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 with this request will also render the bid non-responsive or will constitute a default under the Contract.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications - Related documentation

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required 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 Human Resources and Skills Development Canada (HRSDC) - 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.

2. Additional Certifications Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

2.1 OEM Certification

(a) Any Bidder that is not the Original Equipment Manufacturer (OEM) for every item of hardware proposed as part of its bid is required to submit the OEM's certification regarding the Bidder's authority to provide and maintain the OEM's hardware, which must be signed by the OEM (not the Bidder). No Contract will be awarded to a Bidder who is not the OEM of the hardware it proposes to supply to Canada, unless the OEM certification has been provided to Canada. Bidders are requested to use the OEM Certification Form included with the bid solicitation. Although all the contents of the OEM Certification Form are required, using the form itself to provide this information is not mandatory. For Bidders/OEMs who use an alternate form, it is in Canada's sole discretion to determine whether all the required information has been provided.

(b) If the hardware proposed by the Bidder originates with multiple OEMs, a separate OEM certification is required from each OEM.

(c) For the purposes of this bid solicitation, OEM means the manufacturer of the hardware, as evidenced by the name appearing on the hardware and on all accompanying documentation.

2.2 Software Publisher Certification and Software Publisher Authorization

(a) If the Bidder is the Software Publisher for any of the proprietary software component(s) it bids, Canada requires that the Bidder confirm in writing that it is the Software Publisher. Bidders are requested to use the Software Publisher Certification Form included with the bid solicitation. Although all the contents of the Software Publisher Certification Form are required, using the form itself to provide this information is not mandatory. For bidders who use an alternate form, it is in Canada's sole discretion to determine whether all the required information has been provided.

(b) Any Bidder that is not the Software Publisher of all the proprietary software products or components proposed as part of its bid is required to submit proof of the Software Publisher's authorization, which must be signed by the Software Publisher (not the Bidder). No Contract will be awarded to a Bidder who is not the Software Publisher of all of the proprietary software it proposes to supply to Canada, unless proof of this authorization has been provided to Canada. If the proprietary software proposed by the Bidder originates with multiple Software Publishers, authorization is required from each Software Publisher. Bidders are requested to use the Software Publisher Authorization Form included with the bid solicitation. Although all the contents of the Software Publisher Authorization Form are required, using the form itself to provide this information is not mandatory. For Bidders/Software Publishers who use an alternate form, it is in Canada's sole discretion to determine whether all the required information has been provided.

(c) In this bid solicitation, "Software Publisher" means the owner of the copyright in any software included in the bid, who has the right to license (and authorize others to license/sub-license) its software products.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement

The Contractor must provide the Gas Chromatograph - Triple Quadrupole Mass Spectrometer system in accordance with the Requirement at Annex “A” and the Contractor's technical bid entitled _____, dated _____ .

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

2030 (2013-06-27), General Conditions – Higher complexity - Goods, apply to and form part of the Contract.

3.2 Supplemental General Conditions

4001 (2013-01-28) Hardware Purchase, Lease and Maintenance;
4003 (2010-08-16) Licensed Software; and
4004 (2013-04-25) Maintenance and Support Services, 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 28 March 2014.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Kaye Callahan
Title*:* Supply Team Leader
Public Works and Government Services Canada
Acquisitions Branch
Ontario Region
33 City Centre Dr., Ste. 480
Mississauga, ON
L2B 2N1

Telephone: 905-615-2071
Facsimile: 905-615-2060
E-mail address: kaye.callahan@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 Project Authority (to be provided upon award)

The Project Authority for the Contract is:

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.

5.3 Contractor's Representative

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone : ___ ___ _____

Facsimile: ___ ___ _____
E-mail address: _____

6. Payment

6.1 Basis of Payment

Contractor will be paid firm unit prices as specified in Annex “B”, for a cost of $_____. Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

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 Single Payment

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

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.

8. Certifications

8.1 Compliance

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation 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 _____.

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 supplemental general conditions
4001 (2013-01-28) Hardware Purchase, Lease and Maintenance;
4003 (2010-08-16) Licensed Software; and
4004 (2013-04-25) Maintenance and Support Services
(c) the general conditions 2030 (2013-06-27) Higher Complexity - Goods
(d) Annex A, Requirement;
(e) Annex B, Basis of Payment;
(f) the Contractor's bid dated _____

11. *SACC Manual* Clauses

B1501C (2006-06-16) Electrical Equipment
G1005C (2008-05-12) Insurance

ANNEX "A"

REQUIREMENT

This document is attached separately.

ANNEX "B"

BASIS OF PAYMENT

Firm all inclusive unit price, in Canadian funds, FOB Environment Canada, Burlington ON including delivery, installation, set-up and performance testing. It also includes basic on-site training, advanced on-site training, one year warranty and 1 year extended warranty, **if applicable**, and any other item or service required to complete the system as specified in Annex A. Prices include Canadian customs duties and excise taxes as applicable and Goods and Services Tax/Harmonized Sales Tax EXCLUDED.

1. Instrument #1 - in accordance with Annex A $_____Firm Unit price

   Model and Number(s)

2. Instrument #2 - in accordance with Annex A $_____ Firm Unit Pirce

   Model and Numbers(s)

Total Firm Price **$_____ GST/HST extra**

ANNEX C

EVALUATION CRITERIA AND BASIS OF SELECTION

Document is attached separately

ANNEX D

Bidder Forms

Form 1

OEM Certification Form

This confirms that the original equipment manufacturer (OEM) identified below has authorized the Bidder named below to provide and maintain its products under any contract resulting from the bid solicitation identified below.

Name of OEM_____

Signature of authorized signatory of OEM_____

Print Name of authorized signatory of OEM_____

Print Title of authorized signatory of OEM_____

Address for authorized signatory of OEM_____

Telephone no. for authorized signatory of OEM_____

Fax no. for authorized signatory of OEM_____

Date signed_____

Solicitation Number_____

Name of Bidder _____

Form 2

Software Publisher Certification Form
(to be used where the Bidder itself is the Software Publisher)

The Bidder certifies that is the software publisher of all the following software products and components and that it has all the rights necessary to license them (and any non-proprietary sub-components incorporated into the software) on a royalty-free basis to Canada:

_____

_____

_____

[*bidders should add or remove lines as needed*]

Form 3

Software Publisher Authorization Form

(to be used where the Bidder is not the Software Publisher)

This confirms that the software publisher identified below has authorized the Bidder named below to license its proprietary software products under any contract resulting from the bid solicitation identified below.

This authorization applies to the following software products:

_____

_____

[*bidders should add or remove lines as needed*]

Name of Software Publisher (SP)_____

Signature of authorized signatory of SP_____

Print Name of authorized signatory of SP_____

Print Title of authorized signatory of SP_____

Address for authorized signatory of SP_____

Telephone no. for authorized signatory of SP_____

Fax no. for authorized signatory of SP_____

Date signed_____

Solicitation Number_____

Name of Bidder _____

ANNEX "A"
REQUIREMENT

1.0 General Information

1.1 Requirement

Water Science and Technology Directorate of Environment Canada (Canada Centre for Inland Waters, located at Burlington, Ontario, Canada) requires two new reliable and robust automated Gas Chromatograph - Triple Quadrupole Mass Spectrometers (GC-MS/MS) with a proven track record to achieve Environment Canada deliverables on legacy and new and emerging compounds at ultra trace levels in the Great Lakes Basin and across Canada.

The GC-MS/MS instruments are required to detect, identify and quantify trace levels of PAH's, PCB's, pesticides, phthalates, pharmaceuticals, brominated flame retardants, chlordanes and other semi-volatile contaminants in water, sediment, biota and in groundwater.

Each system must include, at minimum, the following components: a gas chromatograph, a tandem mass spectrometer capable of operating in positive ion electron ionization (EI) mode and positive and negative chemical ionization mode, an uninterrupted power supply (UPS), split/splitless, multimode, and/or PTV inlet, an autosampler, a computer (with keyboard, dual LED monitors, colour laser printer and mouse) equipped with software capable of controlling all components of the GC-MS/MS systems. On site basic training is to be provided upon instrument installation for each instrument. A further additional advanced on-site training at a later date for both instruments (4 day minimum) for at most four operators must also be supplied.

1.2 Delivery

All of the components of the systems (GC, MS, autosampler, software, data system, training module(s), installation, on-site training, etc…) must be delivered to the Aquatic Contaminants Research Division (ACRD), Environment Canada at 867 Lakeshore Road, Burlington, ON, Canada no later than March 28, 2014.

1.2 List of Abbreviations

CCIW	Canada Centre for Inland Waters
ECNI	Electron Capture Negative Ionization
EI	Electron Ionization
GC	Gas Chromatograph
GC-MS/MS	Gas Chromatograph- tandem Mass Spectrometer
LOD	Limit of Detection
LOQ	Limit of Quantification
PCI	Positive Chemical Ionization
NCI	Negative Chemical Ionization
RMS	Root Mean Square
RSD	Relative Standard Deviation
SIM	Selected Ion Monitoring
S/N	Signal to Noise Ratio (signal/noise)
+/-	Positive/negative

2.0 General Requirements – All Instruments

2.1 The systems must be complete with all required accessories to operate in all modes, including gas chromatographs (GC) and triple quadrupole (MS/MS) mainframes, EI, PCI and NCI sources, autosamplers, capillary split/splitless inlets, a PTV inlet and a multi-mode inlet, computers, dual monitors, software, printers and all required interface cables and accessories;

2.2 All equipment must be NEW. Demonstration models, used, refurbished or prototype instruments will not be considered. The system must be comprised of components which are supplied by one contractor;

2.3 If prior to delivery of goods, any component of the purchased GC-MS/MS system is upgraded or there is a new equipment release which would render the system obsolete or inferior in performance/sensitivity, the Contractor will provide Environment Canada with the upgrade or new equipment at no additional cost;

2.4 The system must be reliable and rugged with the ability to handle a wide variety of sample matrices, including biota, water, wastewater, ground water, sludge, biosolids, soil and sediment extracts;

2.5 The Contractor must supply a UPS system and all transformers required to connect the GC-MS/MS systems to the Department's power grid;

2.6 The Contractor must provide a kit containing commonly used/required consumable parts with the instrument for each instrument.

2.7 The Contractor must include, at a minimum, a 1 year on-site warranty including parts and labor, travel, yearly preventative maintenance including any travel and living expenses from date of final acceptance sign-off;

2.8 The Contractor must include 72 hour on-site response time during the warranty period;

2.9 The Contractor must provide basic on-site training at Environment Canada, Burlington, Ontario at the time of installation and at a later date on-site (at Environment Canada, Burlington, Ontario) training for 8 operators (4 operators per instrument);

2.10 24 hour telephone call back service must be available for as long as Environment Canada owns the instruments;

2.11 The entire system must be compatible with helium and hydrogen, so that either can be used as carrier gas for the GC-MS/MS instruments;

2.12 Each system must have a 10-year use guarantee. The Contractor must fully support the instruments for a minimum period of 10 years from the date of purchase. Full support is to include maintenance of parts and trained personnel to service, troubleshoot, and repair the instruments and restore them to factory operating specifications.

2.13 All of the components of the systems (autosampler, injection ports, software, data system, etc…) must be serviced and maintained by the Contractor;

2.14 Instruments must have capability to perform troubleshooting assistance via remote web control by the contractor

2.15 The Contractor must have in stock all consumables used on an annual basis for delivery within 24 hours of an order, and be able to deliver non-stocked items within 5 working days;

2.16 Two (2) full and complete sets of operating, maintenance and troubleshooting manuals, along with diagnostic protocols and lists of spare parts for each entire system must be provided on a CD or DVD with delivery of the systems;

2.17 The Contractor must provide complete installation of the full systems (including GC, MS, autosampler, computer system, and printer), and upon installation, must demonstrate that the system operates as required in these specifications and each component of each instrument meets published performance specifications.

2.18 The instruments provided will be heavily used by a number of researchers with time sensitive deliverables and it is imperative that these instruments be rugged and reliable with a proven track record. Reliable and proven technical support is also critical.

2.19 The Contractor must be the supplier of the product and the technical support provider. Support must be provided within 72 hours of a request. Travel and living charges will not be paid for technical support personnel outside a 100 km radius of CCIW, Burlington, Ontario.

3.0 Mandatory Specifications/Requirements – All Instruments

3.1 Tandem Mass Spectrometer (MS/MS): The MS/MS must have proven track record for reliability and ruggedness with the ability to handle a wide variety of environmental matrices, including biota, water, wastewater, groundwater, sludge, biosolids, soil and sediment extracts.

3.1.1 Must be based on *a* tandem triple-quadrupole mass spectrometry technology with a proven track record;

3.1.2 Must be capable of precursor ion, neutral loss, product ion, multiple reactions monitoring (MRM) and scheduled (i.e. specified time windows) MRM mode;

3.1.3 Must operate in positive electron ionization (EI) mode and in chemical ionization (CI) in both positive and negative modes, all sources must be included;

3.1.4 Must have design features that reduce the neutral noise from metastable helium created in the source;

3.1.5 The source must be able to be heated up to a minimum of 350°C; heating of the ion source is critical to maintaining instrument cleanliness and reducing carryover between samples of highly complex matrices;

3.1.6 Must be able to scan 10 - 1050m/z;

3.1.7 The scan speed must be 6000 amu/s or faster to accommodate GC peak separation;

3.1.8 Must be capable of acquiring at least 500 MRM transitions/sec;

3.1.9 The ion detector must have a digital dynamic range of at least 4×10^6 for linear quantitative response of at least 5 orders of magnitude from the limit of detection;

3.1.10 Must have 0.1 amu mass stability in MS and MS/MS modes over a minimum of 24 hours;

3.1.11 Must be equipped with a turbomolecular pump(s);

3.1.12 Must have self diagnostics for monitoring system parameters with the ability to alert the user

3.1.13 Must have zero cross talk; in MRM (SRM, etc) mode when two consecutive precursor ions have the same product ion, the collision cell must be cleared within the inter-channel delay. For each compound no signal can be observed in the channel corresponding to the other compound;

3.1.14 The ion source must contain a dual filament to minimize instrument downtime;

3.1.15 Must be able to measure 15 fg for OFN in positive EI MRM mode at 99% confidence interval based on eight sequential 1µl splitless injections of 20fg/ µl of OFN.

3.1.16 Must be able to generate classical EI spectra, without any contamination by extraneous effects that might skew the naturally occurring abundances, that can be compared against commercial libraries;

3.2 Gas Chromatograph (GC):

3.2.1. The Gas Chromatograph must be capable of backflush gas chromatography using electronic pressure control (EPC) and a capillary low dead volume ultra inert union. The union apparatus must allow for fast thermal responses";

3.2.2. The GC operating software must have complete control of all GC parameters including backflushing. This function is essential for low level analysis in complex matrices to ensure a clean and robust system and to ensure minimal cross contamination between samples.

3.2.3. Must be able to add a future heart cutting and detector splitting functionality that is controlled by EPC and the existing software;

3.2.4. Must have full electronic pressure control of all gas flow (injectors, backflush, splits). All flows must be controlled by the software;

3.2.5. The inlets must have an inert flow path;

3.2.6. The oven must have a maximum temperature of 450^{o}C or greater and be able to ramp at 120 °C /min or more and have a temperature setpoint resolution of 0.1 °C or better;

3.3 Injector/Autosampler:

3.3.1. Must have a reliable autosampler which holds a minimum of 100 (2mL vials) samples with the GC-MS/MS system capable of running 100 samples without human intervention;

3.3.2. Autosampler vials must be positioned away from the top of the oven that is hot;

3.3.3. Autosampler/injector system must have a reproducibility < 5% RSD;

3.3.4. The injector must be able to perform *reliable* additional sample handling tasks including, as a minimum, in-vial derivatization, mixing, dilutions, and internal standard addition;

3.3.5. The sample tray must have heater/chiller capability;

3.3.6. Autosampler must be able to perform multiple solvent washes for pre and post injection needle rinsing;

3.3.7. The injector must accommodate single stroke injection volumes as small as 0.5 µl to as large as µl;

3.3.8. The injector must have variable needle depths;

3.3.9. The injector must be able to sample from a vial with micro-inserts; and

3.3.10. The injector must have variable speeds.

3.4 Data System:

3.4.1. A reliable data System with a proven track record that must fully control all settable parameters in the MS (source, vacuum, quadrupoles & detector), GC and autosampler to allow unattended operation (i.e overnight runs). The software must be able to acquire mass spectrometer (MS) data, calibrate and quantify target compounds, perform library searches of spectra obtained for target and non-target compound and export the data to EXCEL spreadsheets while unattended;

3.4.2. Software must be able to automatically optimize MRM parameters when building an analysis method;

3.4.3. Software must be able to overlay total, SIM, MRM, neutral loss, precursor and product ion chromatograms;

3.4.4. Must have an automated data processing and quantification package that also allows for manual integration of peak areas with automatic updating of quantification results;

3.4.5. Calibration equations must include linear, non-linear, weighted fit, average response factor, origin included and forced through origin options;

3.4.6. The data system must allow the use of macros for customized data processing and reporting and have computer based tutorials for self paced training;

3.4.7. The data system must allow the creation of user libraries. Must have NIST library with illustration of chemical structures and library search functions integrated into the software;

3.4.8. Any new software versions that become available during the warranty period of the instruments must be included and installed at no extra charge;

3.4.9. The data system must be able to autotune to perfluorotributylamine (PFTBA) without operator intervention, in addition to manual tune capabilities;

3.4.10. Software must have an electronic log to record instrument parameters and track data manipulations in order to produce hardcopies of instrument settings and results;

3.4.11. Must be capable of running several methods in the same automated run;

3.4.12. Must allow manipulation of displays and results to a format compatible with automatic export to current commercial spreadsheet/presentation software packages including Microsoft Exel, PowerPoint, Access;

3.4.13. Software must be supported by the manufacturer for at least 5 years;

3.4.14. Must include CPU, two 24" LED flat screen monitors. 2 desktop color laser all-in-one printers (print, scan, copy, with color capability) for each system;

4.0 Additional Mandatory Specifications for Individual Instruments

4.1 Instrument #1:

4.1.1 Must have a Split/Splitless Inlet with:

- Split ratios up to 7,000:1 or greater;
- Pressure pulsed splitless mode option;
- Maximum temperature 400 °C or greater;
- Electronic pressure control 0 to 150 psig;
- Electronic septum purge flow; and
- Flow must be EPC and work with columns from 0.18 µm to 0.32 µm i.d. using either helium or hydrogen gas as the carrier.

4.1.2 Must have a PTV inlet with the following specifications:

- temperature programming options with a septumless sampling head;
- GC compatible programmable temperature vaporizing inlet with LCO_2 cooling;
- Split/splitless, solvent venting, on column and large volume injection modes;
- Minimum temperature of -70C with LCO_2 cooling; and
- All required software as needed for the use of this inlet.

4.1.3 Must include a hand held electronic leak detector that can detect helium and hydrogen;

4.1.4 Must have one Positive EI source, and one positive and negative chemical ionization source;

4.2 Instrument #2:

4.2.1 Split/Splitless Inlet with:

- Split ratios up to 7,000:1 or greater;
- Pressure pulsed splitless mode option;
- Maximum temperature 400 °C or greater;
- Electronic pressure control 0 to 150 psig;
- Electronic septum purge flow;
- Flow must be EPC and work with columns from 0.18 µm to 0.32 µm i.d using either helium or hydrogen gas as the carrier;

4.2.2 Multiple injection mode inlet with the following attributes;

- Hot or cold split/splitless injections;
- Pulsed split/splitless injections;

- Solvent vent injections;
- Direct injections;
- Temperature programming;
- Maximum temperature 400 °C;
- Liquid CO2 cooling to -70 °C;
- Electronic septum purge control;
- Flow must be EPC and work with columns from 0.18 µm to 0.32 µm i.d.
- using either helium or hydrogen gas as the carrier;

4.2.3 Must have two positive EI sources, one positive and one negative chemical ionization source;

4.2.4 A hand held electronic leak detector that can detect helium and hydrogen;

4.2.5 The system must be configured to analyze pesticides and environmental pollutants in complex matrices. A database of MRM's and instrument settings for these analytes must be provided;

4.2.6 Minimum three year warranty (including parts and labor and travel) from the completion date of instrument installation sign off;

5.0 Requirements Upon Award and Delivery

5.1 The Contracor must install and setup all components on-site at the Department's address noted above using qualified personnel.

5.2 The Contractor must meet the specification in the factory prior to shipment, and after the installation on-site.

5.3 The Contractor must ensure that the system is installed to Environment Canada specifications, and demonstrate satisfactory operation of GC, MS, and autosampler.

5.4 Final acceptance of the instrument is subject to meeting performance requirements detailed above within three months of installation. Acceptance of the instrument will only occur once all specifications have been met. Failure by contractor/supplier to fulfill the specific terms and conditions of this document may result in termination of the purchase. In the event of termination of agreement, the supplier has to remove the instruments delivered at their own expense and return all funds forwarded by Environment Canada.

Annex C

Evaluation Criteria and Basis of Selection

1.0 Mandatory Technical Criteria

Bids not meeting the mandatory requirements outlined in Annex A will be considered non-responsive and will not be evaluated further.

1.1 The Bidder must demonstrate they have a reliable service history (minimum of 5 years) in the field of gas chromatography/mass spectrometry in Canada;

1.2 The Bidder must demonstrate that their proposed systems meet the mandatory requirements and technical specifications detailed at Annex A, Sections 2.0 to 4.0. If any additional components, peripherals or supplies are necessary to meet all specifications and to operate the instrument on arrival at Environment Canada's site, these must be included in the Bidder's response and must be included in the Price at Annex B;

1.3 The Bidder must provide a concise and detailed response to each of the mandatory technical specifications/ requirements. Bidders must provide evidence (instrument specification, publication, documented data, discussion points etc.) to support the fact that their system meets a specification, simply stating that the criteria is met is not sufficient.

1.4 The Bidder must submit test results, with their bid, achieved through analysis of standard and matrix mixtures supplied by Environment Canada, Burlington, ON. Contact Mehran Alaee at (905) 336-4752 or mehran.alaee@ec.gc.ca to obtain samples. Instructions will be provided with the samples. The samples will consist of brominated flame retardants, PAHs, phthalates and chlordanes in sediment matrices. Standard solutions will be provided. The results will be used in the Step 1 of point rated portion of the evaluation. Performance must meet the minimum pass requirements outlined in Annex C.

Experimental conditions used by the Bidder (injector, column, oven temperature program and MS conditions) and chromatograms must be included in the results report.

1.5 Three replicates must be performed, and chromatograms and spectra demonstrating this achievement must be provided with the bid.

1.6 Instrument performance check: The Bidder must provide the name, address, phone number, and/or email address, and instrument configuration of five GC-MS/MS users in Canada. The references must be for same platform as the proposed triple quadrupole GC-MS/MS instrument. References must have been using the systems for at least one year. References will be used in Step 2 of the Point Rated evaluation. See Step 2 of the Point Rated evaluation for further details.

1.7 Service records check: The Bidder must provide the name address, phone number and/or email address of five users of their instruments located within 100 km of CCIW, Burlington, Ontario. References must have been using the systems for at least a year. Bidders may provide references on any type of GC-MS instrument but preference will be given to a reference for a GC-MS/MS (triple quadrupole based instrument. References will be used in Step 2 of the Point Rated evaluation. See Step 2 of the Point Rated evaluation for further details.

2.0 Technical Point Rated Criteria:

2.1. Step 1 - Benchmark Evaluation

The Bidder should demonstrate each of the following capabilities by providing a written report on the samples provided by Environment Canada. Instructions will be provided with the samples. The Bidder must receive a score of **1141 points out of a possible 1630 points or 70%** on the Benchmark Evaluation in order to proceed to the Step 2 of the evaluation. Bids failing to achieve this minimum will be given no further consideration.

Note that wherever "signal to noise ratio" or "signal/noise" is referenced in the subsequent components of this benchmark evaluation, the definition to be used is "RMS signal/noise" which is defined as the signal that is the height above the baseline of the maximum chromatographic peak corresponding to the analyte of interest; baseline noise is defined as the root mean square (standard deviation) of the measured baseline **both 30 seconds before and 30 seconds after** the chromatographic signal of the analyte of interest.

Canada requests that no smoothing or noise reduction algorithms be employed to manipulate RMS signal to noise ratios.

2.1.1 Brominated flame retardants, phthalates and PAHs in positive EI, and MRM mode and chlordanes in ECNI and SIM mode.

(Maximum 1000 points)

The Bidder should submit results obtained for selected brominated flame retardants, phthalates and PAHs in positive EI, and MRM mode and chlordanes in ECNI and SIM mode.

Unless indicated, points will be awarded for each criterion in this section on a pro-rated basis with the best performer receiving full marks and all others being prorated. See **Appendix 1** for example of this calculation.

2.1.1.1 Brominated Flame Retardants:

(Maximum 225 points)

i Sensitivity will be assessed in Standard Solutions

(Maximum 25 points)

In EI+ and MRM mode, sensitivity will be assessed for a mixed standard solution of brominated flame retardants. Details of the compounds in the standard mix will be provided with each solution.

Detection limits (LOD) are to be determined by running serial dilutions of provided standard stock solution without concentration or evaporation, down to a level where the intensity of the chromatographic peak acquired via MRM has a signal/noise of **5** using 3 consecutive injections.

Include laboratory blanks to assess any laboratory contributions which may arise.

Provide **8** integrated chromatograms of consecutive injections with y-axis in counts, x-axis in retention time (min) along with analyte on-column injection mass and specific MRM transition(s). Chromatograms are to be provided without any extra processing (**i.e. no smoothing or noise reduction**) and date and time stamps.
Provide chromatograms for **8** blank solvent injections with the same conditions to prove lack of background and carryover and full disclosure of the GC method and column employed.

ii Sensitivity will be assessed in sediment extracts*:*

(Maximum 100 points)

Using the **identical GC-MS/MS methods** applied to the standards, report the signal/noise for each analyte in the provided sample matrix **without altering the sample extract (i.e. no further concentration, or dilution, etc.).**

The overall signal/noise must be the average of 8 consecutive injections. Provide chromatograms for all 8 injections with date and time stamps.

To be awarded any points, RSD < 25%

iii Chromatographic Resolution will be assessed and pro-rated:

(Maximum 50 points)

Using the sample provided the average chromatographic resolution (n = 8) will be assessed for each brominated flame retardant using identical GC-MS/MS methods and sample conditions as applied above.

Chromatographic resolution will be defined as peak width (in seconds) at half-height. The width at half height of each peak and the %RSD must also be provided.

Provide chromatograms for all 8 injections with date/time stamps.

To be awarded any points, RSD < 25 %

iv Linear dynamic range will be assessed and pro-rated:

(Maximum 50 points)

Using the standard provided the linear dynamic range will be assessed for brominated flame retardants using the same methods as applied in previous sections.

2.1.1.2 Chlordanes: ***(Maximum 225 points)***

In ECNI mode, sensitivity will be assessed for a mixed chlordane standard solution. Details of the compounds in the standard mix will be provided.

i. Sensitivity will be assessed in Standard Solutions ***(Maximum 25 points***)

In ENCI sensitivity will be assessed in selected ion monitoring mode (SIM) for a mixed standard solution of Chlordanes. Details of the compounds in the standard mix will be provided.

Detection limits (LOD) are to be determined by running serial dilutions of provided standard stock solution without concentration or evaporation, down to a level where the intensity of the chromatographic peak acquired via SIM has a signal/noise ratio of **5** using 3 consecutive injections.

Include laboratory blanks to assess any laboratory contributions which may arise.

Provide **3** integrated chromatograms with y-axis in counts, x-axis in retention time (min), analyte on-column injection mass and specific SIM ions. Chromatograms are to be provided without any extra processing (**i.e. no smoothing or noise reduction**) and date/time stamps.

Provide chromatograms for **3** blank solvent injections with the same conditions to prove lack of background and carryover and full disclosure of the GC method and column employed.

ii Sensitivity will be assessed in sediment extracts: ***(Maximum 100 points***)

Using the **identical GC-MS method** applied to the standards, report the signal/noise for each analyte in the provided sample matrix **without altering the sample extract (i.e. no further concentration, or dilution, etc…)** and using a 1 µL injection volume.

The overall signal/noise must be the average of 8 consecutive injections. Provide chromatograms for all 8 consecutive injections with date/time stamps.

To be awarded any points, RSD < 25%

iii Chromatographic Resolution will be assessed and pro-rated: ***(Maximum 50 points***)

Using the sample provided the average chromatographic resolution (n = 8) will be assessed for each chlordane using identical GC-MS method and sample conditions as applied above.

Chromatographic resolution will be defined as peak width (in seconds) at half-height. This value and the %RSD must be provided for each peak.

Provide chromatograms for all 8 injections with date/time stamps.

To be awarded any points, RSD < 25 %

iv Linear dynamic range will be assessed and pro-rated: ***(Maximum 50 points***)

Using the standard provided the linear dynamic range will be assessed for chlordanes using the same methods as applied in previous sections.

2.1.1.3 Polycyclic aromatic hydrocarbons (PAHs) (Maximum 350 points)

i Sensitivity will be assessed in Standard Solutions ***(Maximum 25 points)***

In electron ionization positive mode, sensitivity will be assessed for a mixed standard solution of polycyclic aromatic hydrocarbons (PAHs). Details of the compounds in the standard mix will be provided with standard solution.

Detection limits (LOD) are to be determined by running serial dilutions of provided standard stock solution without concentration or evaporation, down to a level where the intensity of the chromatographic peak acquired via MRM has a signal/noise ratio of **5** using 3 consecutive injections.

Include laboratory blanks to assess any laboratory contributions which may arise.

Provide **8** integrated chromatograms with y-axis in counts, x-axis in retention time (min), analyte on-column injection mass, and specific MRM transition(s). Chromatograms are to be provided without any extra processing (**i.e. no smoothing or noise reduction**) and date/time stamps.

Provide chromatograms for **8** blank solvent injections with the same conditions to prove lack of background and carryover and full disclosure of the GC method and column employed.

ii Sensitivity will be assessed in sediment extracts: ***(Maximum 100 points)***

Using the **identical GC-MS/MS methods** applied to the standards, report the signal/noise for each analyte in the provided sample matrix **without altering the sample extract (i.e. no further concentration, or dilution, etc.).**

The overall signal/noise must be the average of 8 consecutive injections. Provide chromatograms for all 8 injections with date/time stamps and without any extra processing (i.e. no smoothing or noise reduction).

To be awarded any points, RSD must be < 25%

iii System stability ***(Maximum 125 points)***

System stability will be assessed based on a sequential series of matrix injections and concentrations calculated. Standard stability, matrix concentration calculations and laboratory blanks will be assessed and pro-rated.

Using the **identical GC-MS/MS method** applied to the standards, and using the following sequence of samples and standards report the concentration for each analyte in **each injection** of the sequence. Report the individual and average concentration and standard deviation for analytes in 8 sequential injection of the sediment extract. Report the average concentration and standard deviation for analytes in the three standard injections. Samples not to be altered (**i.e. no further concentration or dilution, etc.)**

Mixed standard
Lab Blank
8 sequential injections of sediment extract
Lab Blank
Mixed standard
Lab Blank
8 sequential injections of the sediment extract
Lab Blank
Mixed standard

Matrix %RSD: ***(Maximum 50 points)***
Standard % RSD: ***(Maximum 50 points)***
Lab Blank: ***(Maximum 25 points)***

Provide chromatograms of all injections in the sequence with date/time stamps and without extra processing. If there are time gaps in the sequence no points will be awarded.

iv Chromatographic Resolution will be assessed and pro-rated: ***(Maximum 50 points)***

Using the sample provided the average chromatographic resolution (n = 8 consecutive samples) will be assessed for each PAH using identical GC-MS/MS methods and sample conditions as applied above.

Chromatographic resolution will be defined as peak width (in seconds) at half-height.

Provide chromatograms for all 8 injections with date/ time stamps. Provide peak width at half height for all peaks.

v Linear dynamic range will be assessed and pro-rated: ***(Maximum 50 points***)

Using the standard provided the linear dynamic range will be assessed for PAH's using the same methods as applied in previous sections.

2.1.1.3 Evaluation of signal cross talk using phthalate standards ***(Maximum 200 Points)***

Two solutions containing bis(2-butoxyethyl) phthalate and diisoheptyl phthalate and three mixtures of the two phthalates will be provided. The MRM transition $M^+ \rightarrow 149$ will be used to verify the cross talk between these two transitions.

i Inject the individual standards three consecutive times and verify presence of the signal in the corresponding channel and lack of interference in the other channel. ***(Maximum 75 points – not pro-rated)***

75 points for 0 cross talk

ii Inject the three mixed standards and determine the relative concentrations of each compound in each solution. ***(Maximum 75 points – not pro-rated)***

15 points for each correct determination

iii Use PCI with methane and/or ammonia to enhance the formation of M^+ and inject the individual standards at lower dilutions until a S/N of 3 as defined previously has been reached. Report on the detection limit for 8 consecutive runs. Provide chromatograms for all 16 injections with date/ time stamps. ***(Maximum 50 points)***

Prorated based on the most sensitive result

2.1.2 Software Evaluation: ***(Maximum 230 points)***

During a WebEx virtual conference between EC personnel and the Bidders, the software used to control all components of the proposed systems (including autosampler, GC, and all sources) will be evaluated as follows:

2.1.2.1 Method Development ***(Maximum 130 points***)

a. General evaluation of the speed and ease of method development, MRM optimization and GC method creation with seamless instrument component communication. ***(Maximum 100 points)***

i. Instrument Tuning - real time display, choice of automated or manual; general ease of use. ***(Maximum 25 points)***

Real time display: 5 points
Automated tuning: 5 points
Manual tuning: 5 points

General ease of use:
≤ 2 steps: 10 points
> 2 ≤ 5 steps: 5 points
> 5 steps: 0 points

ii. MS parameter optimization for MRM development - single or multi-compound; choice of automated or manual; number of optimizable parameters. ***(Maximum 50 points)***

Single compound: 10 points
Multiple compounds: 10 points

Automated: 10 points
Manual: 10 points

Number of optimizable parameters
≥ 10 parameter: 10 points
< 10 ≥ 5 parameters: 5 points

< 5 parameters: 0 points

iii. GC method creation and general ease of use. ***(Maximum 25 points)***

Programmable column flow/ pressure ramp control: (5 points)
Retention time locking: (5 points)
Gas saver option: (5points)

Number of steps to create a GC temperature program (10 points)
< 5 steps: 10 points
Between 5 and 10 steps: 5 points
>10 steps: 0 points

b. Availability of a method database. And are existing methods available? ***(Maximum 10 points)***

Yes: 10 points
No: 0 points.

c. Intelligent instrument operation***. (Maximum 20 points)***

Detection of instrument readiness before starting a run (5 points)

Real run-time software decision making (e.g are peak area/retention time/ion ratios within limits? If NOT –

a) re-run sample (5 points)
b) STOP run or CONTINUE (5 points)
c) Send operator notification of problems (e.g. sample is missing, again with STOP or CONTINUE run options) (5 points)

2.1.2.2 Data processing ***(Maximum 70 points)***

a. Ease of peak integration and blank subtraction options for matrix matched calibration curves (number of integration algorithms) ***(Maximum 30 points)***

peak integration
≤ 5 steps: 15 points
>5 ≤ 10 steps: 7 points
> 10 steps: 0 points

blank subtraction
≤ 5 steps: 15 points
>5 ≤ 10 steps: 7 points
>10 steps: 0 points

b. Ability of software to calculate LOD, LOQ, S/N and other related parameters as well as options for flagging errors (such as retention time, ion ratios) in processed data ***(Maximum 20 points)***

LOD: 5 points
LOQ: 5 points
S/N: 5 points
Flagging errors: 5 points

c. Calibration table setup – options for internal/external calibration and TOTAL calculations ***(Maximum 10 points)***

Yes: 10 points
No: 0 points

d. Creation of a library, library search options and library availability ***(Maximum 10 points)***

Creation: 4 points
Search: 3 points
Library availability: 3 points

2.1.2.3 Reporting ***(Maximum 30 points)***

a. Ease and intuitiveness of exporting or copying and pasting data/charts/ curves/ chromatograms/ tables to other software packages (MS Excel/Powerpoint/Word) ***(Maximum 10 points)***

<5 steps 10 points

b. Ease of preparing and designing custom reports ***(Maximum 10 points)***

<10 steps 10 points

c. Are instrument operation/monitoring/troubleshooting-error reporting logged? ***(Maximum 10 points)***

Yes 5 points,
If yes <5 steps to retrieve (5 points)
No: 0 points

2.1.3 Number of qualified service engineers with at least one year of service experience with the proposed systems within a 100 km of Burlington ON. ***(Maximum 200 points)***

100 points per engineer

2.1.4 Additional one year extended warranty, included in the base instrument price for both instruments. ***(Maximum 50 points)***

The Bidder should provide the value of the additional extended warranty for each instrument.

Points will be awarded based on a pro-rated basis with the lowest price receiving full marks and all others being prorated. See **Appendix 1** for example of this calculation.

2.1.5 Ability to upgrade and or trade in within one year with equipment to provide more sensitive full scan capability for both systems. ***(Maximum 50 points)***

Yes: 50 points
No: 0 points

2.1.6 Database evaluation: ***(Maximum 100 points)***

Points will be awarded based on a pro-rated basis with the highest number of compounds or transitions per compounds receiving full marks and all others being prorated. See Appendix 1 for example.

(1) The number of compounds included in the database ***(Maximum 50 points)***

(2) The number of transitions per compound included in the data base
(Maximum 50 points)

2.2 Step 2 - Reference Evaluation ***(Maximum 1310 points)***

The Bidder must receive a score of **917 points out of a possible 1310 points or 70%** on the reference evaluation in order to be considered technically responsive. Bids failing to achieve this minimum will be given no further consideration.

Instrument performance check: Only 3 references will be evaluated. The first 3 references listed by the bidder for 1.6 above will be contacted by Environment Canada and asked to respond to the questions below at 2.2.1 to 2.2.3 regarding instrument performance. If a reference cannot be reached after 3 attempts on separate days, Environment Canada will contact the 4th reference and then 5th reference if needed. If Environment cannot contact at least 3 references after 3 attempts on separate days the outstanding references will be given a score of 0. The average score of the 3 references will be used in the evaluation.

Service records check: Only 3 references will be evaluated. The first 3 references listed by the bidder for 1.7 above will be contacted by Environment Canada and asked to respond to the questions below at 2.2.4 regarding service performance. If a reference cannot be reached after 3 attempts on separate days, Environment Canada will contact the 4th reference and then the 5th reference if needed. If Environment cannot contact at least 3 references after 3 attempts on separate days the outstanding references will be given a score of 0. The average score of the 3 references will be used in the evaluation. Note: Preference will be given to the type of instruments being serviced. A reference for a GC-MS/MS (triple quadrupole based instrument) will get 100% of the actual score for this section, and references for other types of GC-MS instruments will get 90% of the actual score for this section.

2.2.1 Installation: ***(Maximum 130 Points)***

1) Does your instrument system program have complete control over the gas chromatograph and autosampler operational parameters, including the EI, NCI and PCI sources? Have any problems been encountered with software control for units other than the mass spectrometer, i.e. the autosampler, the data system or the GC. ***(Maximum 40 points)***

Points will be deducted as follows:

-20 points if there were problems with autosampler or GC,
-20 points if there was a data system problem

2) Was the instrument delivered on time? Was the installation done promptly? ***(Maximum 40 points)***

Points will be awarded as follows:

20 points if delivered on time,
20 points if the installation was done within 4 weeks,
10 points if the installation was finished within 6 weeks.

3) Were the specifications for sensitivity met within a reasonable amount of time after installation of the instrument? ***(Maximum 50 points)***

Points will be awarded/deducted as follows:

If the specs were met within 2 weeks of the installation: 50 points

Minus 10 points for each additional week it took to meet the specification.

2.2.2 Operation*:* ***(Maximum 350 points)***

1) How does the sensitivity of the instrument in general compare with the manufacturer's specifications? Are sensitivity and resolution requirements for routine analyses met within a reasonable amount of time on a daily basis or is extensive tuning required. ***(Maximum 60 points)***

Sensitivity same or better: 30 points
If did not meet: 0 points.

Resolution
with autotune only: 30 points
autotune + 10 minutes fine tuning: 20 points
autotune + 30 minutes fine tuning: 10 points

2) How difficult is it to clean the source? How much time would you say is necessary to dismantle, clean and reassemble them? ***(Maximum 40 points)***

Easy: 20 points
Average: 10 points
Difficult: 0 points

2 hours or less: 10 points
Between 2 and 4 hours: 5 points
more than 4 hours: 0 points

3) How much down-time has the instrument experienced, outside of that required for routine maintenance purposes, since installation? ***(Maximum 100 points)***

<5%; 100 points,
5-10%: 85 points,
11-20%: 50 points,
21-30%: 15 points,
> 30%: no points

4) Have you found it difficult to reconfigure the instrument and system software to change ionization source? ***(Maximum 50 points)***

Points will be awarded as follows:
Number of steps required,
<4 steps: 50 points
Minus 10 points for each additional step

5) Is the physical process of changing the source difficult? How quickly can it be done? ***(Maximum 50 points)***

Number of steps,
<5 steps 25 points,
Minus 5 for each additional step

Time:
$\leq$ 4 hours: 25 points,
>4 hours $\leq$ 8 hours: 10 points
> 8 hours: 0 points

6) Do you have any complaints about the instrument system program? Is it sufficiently flexible to allow some creativity in setting up non-routins analyses? ***(Maximum 50 points)***

Points will be deducted as follows:
Minus 10 points per complaint up to five complaints

2.2.3 Overall: ***(Maximum 180 points)***

1) Overall, does the instrument perform to a standard deemed satisfactory by the primary users? ***(Maximum 100 points)***

100 % of the time 100 points
<100% and ≥80% of the time: 75 points
<80% and ≥ 75% of the time: 50 points
<75% and ≥60% of the time: 25 points
>60%: 0 points

2) How many long sequences have you run on your instrument (total run-time > 12 h)? How often have you lost communication between any component of your instrument and the computer controlling the instrument during a long sample sequence? ***(Maximum 80 points)***

If less than 10 long sequences (in total) have been run, the reference's response to this question will be disregarded and no points will be awarded.

If more than 10 long sequences (in total) have been run:
No lost communications: 80 points
Once: 40 points
Twice: 20 points

2.2.4 Instrument service record check: ***(Maximum 650 points)***

1) What has been the response time for any service requests, both for telephone call-backs and for on-site service? Has the response time been within the designated agreement? ***(Maximum 100 points)***

Points will be awarded as follows:

Within designated response time:
Yes: 50 points
No: 0 points

≤ 4 hours: 50 points
>4 ≤ 8 hours: 25 points
> 8 hours: 0 points

2) Have parts been available within a reasonable length of time (within a week)? Does your instrument supplier keep a good stock of expendable components on hand in North America so that repairs and/or replacement can be effected within 24 hours? ***(Maximum 100 points)***

Points will be awarded as follows:

Parts
Yes: 50 Points

Stock
Yes: 50 points

3) If you have ever lost a turbo pump, did the instrument supplier replace the pump with a new pump or a rebuilt pump? Did the supplier remove the old pump for rebuilding or were you allowed to keep it for rebuilding yourself? ***(Maximum 100 points)***

Points will be awarded as follows:

No need to replace the pump: 100 points
If replaced with new pump: 50 points,
If replaced with rebuilt pump: 25 points
If replaced, were you allowed to keep the old pump: 50 points

4) How often were software upgrades on the data system available? Are these upgrades provided at reasonable cost and have they been fully compatible with the operating system and associated hardware. ***(Maximum 100 points)***

Points will be awarded as follows:

At least once every 2 years: 30 points

Cost of upgrades:
40 points for cost (pro-rated) (The cost for each of the Bidder's references will be added together and divided by 3 to determine the cost to be used in the point rating calculation. Points will be awarded on a prorated basis with the lowest cost receiving full marks and all others being prorated accordingly. See **Appendix 1** for example of the calculation

Compatibility
Yes: 30 points

5) Service Engineer ***(Maximum 150 points)***

i. Was the service engineer courteous and appropriately professional? ***(Maximum 50 points)***

Points will be awarded as follows:
Yes: 50 points
Somewhat: 25 points
No: 0 points

ii Was the service engineer or technician knowledgeable and able to diagnose and rectify the issue for which they were called? If the issue was not rectified, did the service engineer or technician have a good idea of how to proceed in order to resolve the issue? ***(Maximum 100 points)***

for successfully diagnosing and rectifying the issue: 50 points
if unable to properly diagnose issue in 1 service visit: 0 points

if issue not rectified and engineer knows how to proceed: 25 points,
if not able to confidently and correctly advise how to proceed: 0 points.

6) What was the cost of the service visit, both in terms of money and in terms of instrument down-time spent while awaiting the completion of the repair? ***(Maximum 100 points)***

Points will be awarded as follows:

For cost of service visit.
≤ $1000: 50 points
>$1000 ≤ $2000: 25 points
>$2000 ≤ $3000: 10 points
> $3000: 0 points

For length of down time
½ day: 50 points
1 day: 25 points
2 days: 10 points
> 2 days: 0 points

3.0 Financial Evaluation

3.1 The Bidder must submit their financial bid in accordance with Annex B, Basis of Payment.

3.2 The price used in the evaluation will be the aggregate of the firm lot prices for the systems.

3.4 SACC Manual Clause A0220T (2007-05-25) Evaluation of Price

4.0 Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)

1. *To be declared responsive, a bid must:*

   a. comply with all the requirements of the bid solicitation; and

   b. meet all mandatory criteria; and
   c. obtain the required minimum points specified at 2.1 (Step 1) and 2.2 (Step 2) of the technical evaluation the technical evaluation rating.

The rating is performed on a scale of 2940 available points.

2. Bids not meeting (choose "(a) or (b) or (c) will be declared non-responsive.

3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60 % for the technical merit and 40 % for the price.

4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 60 %

5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40 %.

6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

Example Calculation:

Maximum available points: 2940

	Bidder A	**Bidder B**	**Bidder C**
Overall Technical Score	2500/2940	2100/2940	2800/2940
Offer Evaluated Price	$475,000.00	$450,000.00	$500,000.00
Calculations			
Technical Merit Score	2500/2940 x 60 = 51.02	2100/2940 x 60 = 42.85	2800/2940 x 60 = 57.14
Pricing Score	450/475 x 40 = 37.89	450/450 x 40 = 40	450/500 x 40 = 36.00
Combined Rating	88.91	82.85	93/14
Overall Rating	2nd	3rd	1st

Appendix 1 – Pro-rating Calculations for Point Rated Evaluation

A.1 Phthalates, brominated flame retardants, pesticides, and polycyclic Aromatic Hydrocarbons:

a) Example where points are awarded on a pro-rated basis for sensitivity.

Maximum points available: 50

Bidder	Sensitivity	Calculation	Score
A	2 ng/L – best sensitivity	2/2 x 50	50 points
B	4 ng/L	2/4 x 50	25 points
C	2.2 ng/L	2/2.2 x 50	45.5 points

b) Example where points are awarded on a pro-rated basis for signal to noise ratio on an environmental standard

Maximum points available: 50

Bidder	Signal to Noise Ratio	Calculation	Score
A	10	10/12 x 50	41.7 points
B	8	8/12 x 50	33.3 points
C	12 – best ratio	12/12 x 50	50 points

A.2 Cost of one year extended warranty, included in the base instrument.

Maximum points available: 50

Bidder	Cost	Calculation	Score
A	$10,000.00 – lowest cost	10/10 x 50	50 points
B	$20,000.00	10/20 x50	25 points
C	$25,000.00	10/25 x 50	20 points

A.3 Cost of upgrades

Maximum points available: 40

Bidder	Average Cost	Calculation	Score
A	$1,000.00 – lowest cost	1000/1000 x 40	40 points
B	$2,000.00	1000/2000 x 40	20 points
C	$4,000.00	1000/4000 x 40	10 points

For example vendor A has 100, B has 70 and C has 40 compounds in their database. Vendor A, B, and C will receive 50, 35, and 20 points respectively.

A.4 Number of compounds or transitions

Maximum points available: 50

Bidder	Number	Calculation	Score
A	100 – highest number	100/100 x 50	50 points
B	50	50/100 x 50	25 points
C	25	25/100 x 50	10 points