

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

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**

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

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

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

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

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

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

Comments - Commentaires

Title - Sujet ICP-MS	
Solicitation No. - N° de l'invitation K8A70-139006/A	Date 2013-07-11
Client Reference No. - N° de référence du client K8A70-139006	
GETS Reference No. - N° de référence de SEAG PW-\$\$PV-916-63078	
File No. - N° de dossier pv916.K8A70-139006	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-08-21	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Emond, Linda A.	Buyer Id - Id de l'acheteur pv916
Telephone No. - N° de téléphone (819) 956-4014 ()	FAX No. - N° de FAX (819) 956-3814
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF THE ENVIRONMENT BIOLOGICAL METHODS 335 RIVER RD JESSICA VELICOGNA SCIENCE & TECHNOLOGY OTTAWA Ontario K1A0H3 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

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

Issuing Office - Bureau de distribution

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

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

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K8A70-139006/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

pv916

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

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

K8A70-139006

pv916K8A70-139006

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with this bid solicitation..

2. Requirement

2.1 The requirement is detailed under the "Annex A".

2.2 Optional Warranty

The Contractor grants to Canada the irrevocable option to purchase two (2) years warranty, one (1) year at a time after the initial three (3) year period under the same terms and conditions and at the prices stated in the contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

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

1.1 SACC Manual Clauses

B1000T

Condition of Material

2007-11-30

2. Submission of Bids

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

3. Enquiries - Bid Solicitation

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

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

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 (two (2) copies)
 Section II: Financial Bid (one (1) copy)
 Section III: Certifications (one (1) copy)

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

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

- (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.

1.1 Section I: Technical Bid

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

In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work. (choose if statement of work)

1.1.1 Installation/Unpacking

On-site installation and unpacking must be provided and be carried out by a qualified service technician. Unpacking and transporting the instrument from the loading dock to the laboratory must be included. (refer to: Annex B - section 18 System Implementation, (a))

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

1.1.2 Training

On-site user training course for at least two (2) consecutive days must be provided for up to five (5) operators. All costs associated with the on-site training must be included in the price.

Training is to take place at a mutually agreed upon date, during regular working hours, i.e. Monday through Friday between 0830 to 1630 hours. Travel, meals and accommodation for the trainer must be provided by the vendor with no additional charges.

On-site training will be completed within _____ calendar days of installation. Provide complete details of training e.g. scope, etc.,

1.1.3 Service

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

Response for service must be within 24 hours or less.

An on -site repair/replacement of components within two (2) business days. Travel, meals and accommodation for the service technician must be provided by the vendor with no additional charges.

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

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

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

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

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

1.1.4 Product(s) Offered

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

Name of Manufacturer: _____

Model/Part Number: _____

Literature attached: Yes (____) No (____)

1.1.5 Point of Manufacture/Shipping

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

Location: _____

Postal Code: _____

1.1.6 Delivery

While delivery is requested by October 31, 2013, the best delivery that could be offered by the Bidder is _____.

1.1.7 Software Upgrades.

The Bidder must provide all software updates and new releases to the purchaser for a period of five (5) years following the acceptance, at no additional cost.

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

1.1.8 Contacts

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

1.2 Section II: Financial Bid

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

A firm unit price must be filled in for each of the option periods. If the bidder fails to quote a firm unit price for each of the option periods, the bidder will be considered non-compliant and no further consideration will be given.

1.2.1 Exchange Rate Fluctuation

C3011T

Exchange Rate Fluctuation

2010-01-11

1.3 Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

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

1.1 Technical Evaluation

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

Factors for Evaluation

1. PRICING BASIS (MANDATORY): Prices must be firm, DDP Delivered Duty Paid.

2. ABILITY TO MEET THE TECHNICAL REQUIREMENT (MANDATORY):

a) For Items Defined by Specifications:

The bidder is requested to cross reference the mandatory technical criteria contained herein to their supporting technical documentation.

b) Provision of Supporting Technical Documentation:

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

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

3. **COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS REQUEST FOR PROPOSAL (MANDATORY)**

4. Please note that the requirements of the Federal Contractors Program for Employment Equity may apply - (see Part 5).

1.1.1 **Mandatory Technical Criteria**

As per Annex "B"

2.1 Financial Evaluation

The lowest evaluated price will be established using the following criteria:

- a) prices will be evaluated in Canadian Funds including Excise Taxes, Canadian Customs Duty (if applicable) and applicable taxes excluded. For evaluation purposes, bids received in a foreign currency will be converted to Canadian funds using the appropriate rate of exchange using the rate quoted by the Bank of Canada as being in effect on date of bid closing.
- b) prices will be evaluated on a DDP Ottawa, Ontario
- c) for bid evaluation purposes only, the total bid price will be determined by adding the cost for the firm quantity total with the cost for the optional years.

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 lowest aggregate evaluated price (including the option years) will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and related documentation to be awarded a contract. Canada will declare a bid non-responsive if the required certifications and related documentation are not completed and submitted as requested.

Compliance with the certifications bidders provide to Canada is subject to verification by Canada during the bid evaluation period (before award of a contract) and after award of a contract. The Contracting Authority will have the right to ask for additional information to verify bidders' compliance with the certifications before award of a contract. The bid will be declared non-responsive if any certification made by the Bidder is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications, to provide the related documentation or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications - Related documentation

- 1.1.1 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.

2. Additional Certifications Required with the Bid

Bidders must submit the following duly completed certifications with their bid.

2.1 Federal Contractors Program for Employment Equity - Certification

2.1 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.hrsdc.gc.ca/eng/labour/index.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.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this contract.

2. Requirement

2.1 Requirement

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

2.2 Optional Warranty

The Contractor grants to Canada the irrevocable option to purchase two (2) years warranty, one (1) year at a time after the initial three (3) year period under the same terms and conditions and at the prices stated in the contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option two (2) months before each warranty period by sending a written notice to the Contractor.

2.3 Installation/Unpacking

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

2.4 Manuals

Refer to Annex "B", section 17, a).

2.5 Training

On-site user training course for at least two (2) consecutive days must be provided for up to five (5) operators. All costs associated with the on-site training must be included in the price.

Training is to take place at a mutually agreed upon date, during regular working hours, i.e. Monday through Friday between 0830 to 1630 hours. Travel, meals and accommodation for the trainer must be provided by the vendor with no additional charges.

2.6 Software Upgrades

The Bidder must provide all software updates and new releases to the purchaser for a period of five (5) years following the acceptance, at no additional cost.

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

3. Standard Clauses and Conditions

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

3.1 General Conditions

2010A (2013-04-25) General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

Subsection 9 of 2010A (2013-04-25) General Conditions - Goods or Services, is amended as follows:

Delete: Subsection 9 in his entirety.

Insert: " The Work is subject to inspection and acceptance by Canada. Despite prior acceptance of the Work and without restricting any conditions or warranty imposed by law, the Contractor, if requested by the Minister to do so, must replace, repair or correct at its option and its own expense any Work which becomes defective or which fails to conform to the Contract requirements, where applicable, including vendor supplied third party equipment such as water chiller, autosampler, computer system, software, interfaces, and cables. For goods, the on-site warranty period will be **three (3) year thirty six months** after delivery and acceptance or the length of the Contractor's or manufacturer's standard warranty period, whichever is longer. The on-site warranty covers parts, labor and all related expenses. Any Work replaced, repaired or corrected pursuant to this section is subject to all provisions of the contract to the same extent as Work initially performed."

4. Term of Contract

4.1 Delivery Date

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

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

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

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

5.2 Technical Authority **(to be filled in only at contract award)**

The Technical Authority for the Contract is:

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

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

5.3 Contractor's Representative (**fill in**)

The telephone number of the person responsible for:

General enquiries

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

Delivery Follow-up

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

6. Payment

6.1 Basis of Payment - Firm Price

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

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

6.2 Terms of Payment

Delivery will be made (date will be determine at the contract stage). It is to be noted that no advance payment will be considered.

Where the delivery takes place (date will be determinate at the contract stage) and the installation/final acceptance takes place (date will be determinate at the contract stage) , the following must apply:

- a) 80% of the total contract cost, payable within 30 days of delivery of the goods at destination, and

- b) 20% of the total contract cost, a holdback, will be payable within 30 days of installation and final acceptance.

6.3 SACC Manual Clauses

H1001C

Multiple Payment

2008-05-12

7. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
 - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
 - (c) one (1) copy must be forwarded to the consignee.

8. Certifications

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 the province of Ontario, Canada.

10. Priority of Documents

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

- (a) the Articles of Agreement;
- (b) 2010A (2013-04-25) General Conditions - Goods (Medium Complexity);
- (c) Requirement;
- (d) the Contractor's bid dated (to be filled in at contract award).

11. SACC Manual clause

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

12. Shipping Instructions - Delivery at Destination

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

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

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

ANNEX A**REQUIREMENT / BASIS OF PAYMENT**

The Ecotoxicology and Wildlife Health Division of the Science and Technology Branch of Environment Canada (EC-STB-EWHD) requires an Inductively Coupled Plasma – Mass Spectrometer (ICP-MS) for nanotechnology research, in particular, to do single particle analysis (sp-ICP-MS) in environmental samples such as soil and worms, and to quantify and characterize metal nanoparticles (NP) by means of Field Flow Fractionation coupled with ICP-MS (FFF-ICP-MS). The instrument is also required for the analysis of metals in environmental samples such as animal tissues, eggs, invertebrates, plants, and soils and sediments, for the purpose of determining the impacts of toxic substances on animals, plants, and soil invertebrates and microbial communities in the environment.

In accordance with the mandatory specifications detailed in the Request for Proposal, the proposal must include on-site user training course for at least two (2) consecutive days for up to five (5) operators. All costs associated with the on-site training must be included in the price. Training is to take place at a mutually agreed upon date, during regular working hours, i.e. Monday through Friday between 0830 to 1630 hours. Travel, meals and accommodation for the trainer must be provided by the vendor with no additional charges. Must include option to purchase two (2) years warranty, one (1) year at a time after the initial three (3) year period under the same terms and conditions and at the prices stated in the contract. For delivery to Ottawa, Ontario. Delivery is requested by October 31, 2013.

Description	Firm Qty	Firm price
ICP-MS (inductively coupled plasma-mass spectrometer) including three (3) year warranty. As per specifications on Annex A	1	\$ _____
Optional Warranty		
First year warranty after the initial three (3) year period	1 year	\$ _____
Second year warranty after the initial three (3) year period	1 year	\$ _____

ANNEX B

MANDATORY SPECIFICATIONS

INDUCTIVELY COUPLED PLASMA-MASS SPECTROMETER

The ICP-MS system must consist of the following major components, complete with all Software / Hardware, interfacing, training and warranty necessary for a fully integrated system. Details are found in the following.

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

1. Reliability

Vendors must identify no less than five (5) installations over the past three (3) years, providing a name and point of contact data so that EC can verify the success, utility and confirm the instruments stated capabilities.

Reference in Contractors Proposal: _____

2. Facilities

- a) The ICP-MS must be able to operate under the following conditions:
Temperature: 15-30°C. (maximum rate of change 5°C /hr.).

Reference in Contractors Proposal: _____

Humidity (non-condensing): 20-80%.

Reference in Contractors Proposal: _____

Voltage: 200-240V, 50/60Hz, 30Amp (or less), single phase.

Reference in Contractors Proposal: _____

- b) In order to fit the allocated laboratory space, the ICP-MS must be stand-alone or come with a mobile bench.

If stand-alone, the unit must come with a bench to hold the autosampler, with a combined maximum width of 6.5 feet (1981 mm) and a maximum depth of 2.6 feet (792 mm).

Reference in Contractors Proposal: _____

If bench-top, then the unit must come with a bench with a maximum width of 6.5 feet (1981 mm) and a maximum depth of 2.6 feet (792 mm) and be able to hold both the ICP-MS & autosampler.

Reference in Contractors Proposal: _____

3. Inductively Coupled Plasma Source

- a) The Radio Frequency (RF) generator must have free running RF power, adjustable from 500-1600W, which powers the ICP-MS at 40 MHz or at 27 MHz to provide highly efficient power, coupling to the plasma with rapid and responsive electronic automatic tuning.

Reference in Contractors Proposal: _____

- b) Proof of compliance with CSA safety regulations, Electrical Equipment for Measurement, Control, and Laboratory Use, must be supplied. The ICP source must be completely shielded from stray UV and RF emissions.

Reference in Contractors Proposal: _____

- c) All gas flows including the nebulizer, plasma and auxiliary gasses must be fully and independently variable and under mass flow control to ensure consistent operation and enable the plasma to be optimized.

Reference in Contractors Proposal: _____

All mass flow controllers must be completely integrated into the instrument and under software control.

Reference in Contractors Proposal: _____

- d) Safety interlocks throughout the system must allow safe shutdown with no damage to the instrument in case of loss of power, gas supply, water cooling, vacuum loss or other system malfunction.

Reference in Contractors Proposal: _____

4. Sample Introduction System

- a) The ICP-MS must be equipped with a low-flow concentric nebulizer and cyclonic spray chamber that is located outside the torch box to facilitate maintenance and changeover to alternative sample introduction devices.

Reference in Contractors Proposal: _____

- b) The spray chamber and ICP torch must be designed to be removed by the user.

Reference in Contractors Proposal: _____

- c) The torch must be quartz, and demountable, with an automated X, Y, Z repositioning for alignment of the plasma with the sample cone orifice.

Reference in Contractors Proposal: _____

- d) The nebulizer must be tolerant of sample matrices up to 0.2% dissolved solids.

Reference in Contractors Proposal: _____

- e) The spray chamber must be resistant to acid concentrations up to 20%.

Reference in Contractors Proposal: _____

5. ICP-MS Interface

- a) Routine maintenance of the sampler and skimmer cones must be possible without having to break the vacuum.

Reference in Contractors Proposal: _____

6. Ion Focusing System

- a) The instrument must be equipped with a lens, ion guide or deflection system to reduce interference and remove photons and neutrals from the plasma beam and thereby reducing background noise.

Reference in Contractors Proposal: _____

- b) The Ion Focusing System must be fully computer controlled for optimization of voltages via system software.

Reference in Contractors Proposal: _____

- c) The Ion Focusing System must be accessible without breaking the vacuum.

Reference in Contractors Proposal: _____

- d) The Ion Focusing System must not require routine cleaning (up to once per year).

Reference in Contractors Proposal: _____

7. Mass Spectrometer/Quadrupole

- a) The mass spectrometer must be capable of scanning a mass range of 2 to 260 amu (atomic mass units).

Reference in Contractors Proposal: _____

- b) The quadrupole must have a resolution of ≤ 1.0 amu.

Reference in Contractors Proposal: _____

- c) Scanning speed, Li to U, must be at ≥ 3000 amu/sec.

Reference in Contractors Proposal: _____

8. Detector

- a) The detector must be an electron multiplier detector that operates in a simultaneous dual-mode, producing no less than nine (9) orders of linear dynamic range, to provide maximum concentration range and fastest data acquisition.

Reference in Contractors Proposal: _____

- b) Cross calibration of detector modes must be fully automated and performed by the software.

Reference in Contractors Proposal: _____

- c) Must be capable of providing a dead time of ≤ 35 nsec.

Reference in Contractors Proposal: _____

9. Vacuum system

- a) The ICP-MS must feature a vacuum system capable of achieving a normal operating pressure of 1×10^{-6} mbar or better.

Reference in Contractors Proposal: _____

- b) The vacuum must be monitored by the software, which will automatically shut down the system in the event of a vacuum failure.

Reference in Contractors Proposal: _____

- c) The vacuum system must consist of at least one pump that can be accessed without the use of tools, in order to facilitate changing the oil when necessary.

Reference in Contractors Proposal: _____

- d) An oil pan must be included.

Reference in Contractors Proposal: _____

- e) The vacuum system must include an automated isolation gate valve positioned after the cones, to isolate the high vacuum region in the event of power, water, argon or interface vacuum failure.

Reference in Contractors Proposal: _____

The gate valve must also allow cones to be removed for cleaning without venting the vacuum system.

Reference in Contractors Proposal: _____

- f) During full system shutdown or power failure, the analyzer vacuum chamber must be completely protected from oil back-streaming from the backing pump by an automatic isolation valve in the backing line.

Reference in Contractors Proposal: _____

- g) If the vacuum system is exterior to the instrument, then a vacuum pump enclosure must be included to reduce the noise in the lab that fits within the total specified allotted space (see 2b).

Reference in Contractors Proposal: _____

10. Collision/Reaction Cell/Interface

- a) The ICP-MS system must have collision-reaction capabilities to eliminate polyatomic interferences from the spectrum.

Reference in Contractors Proposal: _____

- b) The system must use, but not be restricted to, Hydrogen, and/or Helium gases to improve sensitivity of elements that are prone to interference, such as arsenic and selenium.

Reference in Contractors Proposal: _____

- c) All modes must be able to be included in one run or batch of analyses, since methods include multiple elements with different interferences.

Reference in Contractors Proposal: _____

- d) Time to switch between modes and achieve steady state during a run must be ≤ 15 sec.

Reference in Contractors Proposal: _____

11. System Controller and Data Acquisition

- a) The instrument must feature an on-board microprocessor (system controller) to control the instrument independently of the data system, so that instrument control and safety interlocks are not compromised should the data system fail.

Reference in Contractors Proposal: _____

- b) The system controller must monitor system status, RF power, gas supplies, instrument temperatures, electrical systems, vacuum system and components and cooling systems.

Reference in Contractors Proposal: _____

12 Computer System

- a) Operating System: Windows 7 or better

Reference in Contractors Proposal: _____

Software: Microsoft Office to include Excel.

Reference in Contractors Proposal: _____

Processor speed: minimum 3.2 Ghz

Reference in Contractors Proposal: _____

RAM: minimum 2 GB of RAM

Reference in Contractors Proposal: _____

Hard Disk: minimum 250 GB

Reference in Contractors Proposal: _____

Drives: minimum 16x DVD±RW

Reference in Contractors Proposal: _____

Ports: 1) minimum 2 USB 2.0 ports accessible on the monitor or the front of the PC.

Reference in Contractors Proposal: _____

2) as required for the instrument, printer & monitor.

Reference in Contractors Proposal: _____

- 3) including one unused integrated 10/100/1000 Base-T LAN interface in order for capability to connect to laboratory's network.

Reference in Contractors Proposal: _____

b) Accessories

- Monitor: minimum 22 inch widescreen LCD

Reference in Contractors Proposal: _____

- Keyboard

Reference in Contractors Proposal: _____

- Optical mouse

Reference in Contractors Proposal: _____

- Printer: Colour, laser printer

Reference in Contractors Proposal: _____

- All cables and interfaces required for operation.

Reference in Contractors Proposal: _____

13. Software

- a) All tuning parameters, including plasma position, must be stored on disk in a tune file that can be recalled at any time.

Reference in Contractors Proposal: _____

- b) Must have full tuning capability including automatic optimization of plasma position, ICP, ion lenses, mass calibration, and detector.

Reference in Contractors Proposal: _____

- c) The Tuning software must be able to simultaneously optimize the ion signal while adjusting the plasma parameters to reduce interferences and background.

Reference in Contractors Proposal: _____

- d) The Tuning software must automatically generate a report which assesses all aspects of the system performances and which is time stamped record for audit trail purposes.

Reference in Contractors Proposal: _____

- e) The software must have internal diagnostics including error checking and a complete fault log to help with troubleshooting.

Reference in Contractors Proposal: _____

- f) The software must include qualitative, semi-quantitative, quantitative, isotope ratio, and isotope dilution analysis modes.

Reference in Contractors Proposal: _____

- g) The software must have Real Time viewing of the data during acquisition, displaying transient and continuous signal profiles and spectral profiles in real time.

Reference in Contractors Proposal: _____

- h) The software must have several calibration modes including external calibration, internal standards, method of standard additions, isotope ratio, isotope dilution, and blank subtraction.

Reference in Contractors Proposal: _____

- i) The software must have full data reprocessing capabilities including editing samples, blanks, standards, calibration curves, elements, isotopes, interference correction equations, and reporting parameters without the need to re-run samples.

Reference in Contractors Proposal: _____

- j) The software must have the ability to automate quality assurance/quality control (QA/QC).

Reference in Contractors Proposal: _____

- k) The software must be able to flag data as set up in QA/QC, as well as samples that are beyond the capability of the detector.

Reference in Contractors Proposal: _____

- l) The software must have the capability for automated unattended shutdown at the end of a batch analysis.

Reference in Contractors Proposal: _____

- m) It must be able to import data from Microsoft® Excel, or at the very least be able to copy and paste tables of data, into the ICP-MS system sample files.

Reference in Contractors Proposal: _____

- n) It must be able to export the analytical results from the software into Microsoft® Excel in a table format.

Reference in Contractors Proposal: _____

Any flags produced in the instrument software must also be transferred to Excel, along with QA/QC data run in the method.

Reference in Contractors Proposal: _____

- o) Software upgrades must be available at no charge, for a period of five (5) years, commencing on the date of instrument acceptance. (refer to Part 3 at 1.1.7)

Reference in Contractors Proposal: _____

14. Water chiller

- a) The system must include a re-circulating water chiller with the cooling capacity to cool all components of the ICP-MS system.

Reference in Contractors Proposal: _____

- b) The water chiller must be capable of continuous operation and capable of maintaining a constant temperature between 6°C to 20°C, $\pm 3^\circ\text{C}$.

Reference in Contractors Proposal: _____

15. Autosampler

- a) An ESI SC-2 DX autosampler or equivalent, capable of handling 120 - 15 mL tubes plus positions for blanks and standards.

Reference in Contractors Proposal: _____

- b) The autosampler must include the Elemental Science FAST automated sample introduction system or equivalent valve which connects to the sample introduction system on the ICP-MS to automate the sample introduction system and improves sample throughput by reducing sample uptake, stabilization and rinse steps.

Reference in Contractors Proposal: _____

- c) The sample probe must be metal-free and continuously rinsed by fresh wash solution by an integral rinse pump in between use.

Reference in Contractors Proposal: _____

- d) The autosampler must come with a Clean Enclosure appropriate for the autosampler, e.g. ESI ULPA Filtered SC-2 DX Clean Enclosure.

Reference in Contractors Proposal: _____

16. Field Flow Fractionator Connection Software

a) The ICP-MS must be able to seamlessly integrate with a Post Nova Field Flow Fractionation system, AF2000MT, which will be used for FFF-ICP-MS. The integration includes, but is not limited to:

- Communicating with the ICP-MS so that the sample fraction is taken from the FFF at the appropriate time;
- Communication so that both instruments are shut down or put in stand-by mode when analyses are done;
- Turning off the FFF if there are errors with the ICP-MS, so that fraction collection is stopped, to reduce risk of damage or loss of sample.

Reference in Contractors Proposal: _____

17. Documentation

- a) The system must be supplied with full documentation including an operator's manual, administration and maintenance manual, spare parts catalog and a comprehensive applications handbook specifically written for the system being offered in English and French.

Reference in Contractors Proposal: _____

18. System Implementation

- a) Unpacking and transporting the instrument from the loading dock to the laboratory must be included.

Reference in Contractors Proposal: _____

- b) The system must include instrument installation and system operation verification from a vendor qualified technician. Operation verification will consist of, but is not restricted to, the analysis of test samples provided by EWHG to demonstrate accuracy within $\pm 10\%$ of target values and stability of $\pm 3\%$ over the course of a 20 minute run. Acceptance of the system will be based on the successful operation verification which should take place within approximately 10 business days from installation.

Reference in Contractors Proposal: _____

- c) The system must include a minimum of three (3) year parts and labour warranty that provides both on-site as well as telephone support. This warranty must include the full instrument as well as parts, including vendor supplied third party equipment such as water chiller, autosampler, computer system, software, interfaces, and cables. A qualified service technician must reply by telephone or email within 24 hours of a call to the vendor; and/or an on-site repair/replacement of components within two (2) business days. Travel, meals and accommodation for the service technician must be provided by the vendor with no additional charges.

Reference in Contractors Proposal: _____

- d) An Additional minimum one (1) year of free telephone or email support must be included after the initial three (3) year warranty period ends.

Reference in Contractors Proposal: _____

- e) Trained application consultants must provide customized applications support by telephone or email for at least fifteen (15) years and must be available for on-site visits at the vendor's expense for a period of one (1) year, both commencing on the date of acceptance of the instrument by the Ecotoxicology and Wildlife Health Division.”.

Reference in Contractors Proposal: _____

19. Performance Specifications

Specifications to be tested in the vendor's lab, under the normal operating conditions, with dwell/integration times no longer than three (3) seconds, unless otherwise specified. Please provide a report that includes these operating conditions, and date analysis was completed. With the exception of nanoparticle analysis, samples must all be in dilute nitric acid.

All of these specifications will have to be duplicated on site before the instrument is accepted. All parts used to obtain these specifications must be included in the bid.

- a) Single Particle ICP-MS(SP-ICP-MS)

The system must be capable of SP-ICP-MS. This must be demonstrated by providing analysis of:

- NIST AuNP at 30nm (8012) and 60nm (8013)
- OR Ted Pella AgNP at 20nm and 60nm.

Five (5) replicates of each size should be completed and must have a RSD of <20%. The following parameters must be reported:

- Sweeps per reading
- Reading per replicate
- Dwell time

- Settling time between dwell time
- Ionic concentration of Au or Ag (as applicable)
- Size, size distribution and concentration of nanoparticles.

Reference in Contractors Proposal: _____

b) Background

- Standard mode: mass 9 (Be) < 5 cps (counts per second)
- He mode: mass 9 (Be) < 1 cps

Reference in Contractors Proposal: _____

c) Oxide Species - $\text{CeO}^+/\text{Ce}^{2+}$ < 2.5% RSD (Relative Standard Division)

Reference in Contractors Proposal: _____

d) Double Charged Species - $\text{Ce}^{2+}/\text{Ce}^+$ < 3.0% RSD

Reference in Contractors Proposal: _____

e) Short Term Stability - 20 min < 3.0% RSD

Use a 1-10 µg/L multi-element solution, automatically cycling between modes, using a three (3) second integration time, with oxides < 2.5 % RSD, and double charged < 3.0% RSD, without internal standardization.

Reference in Contractors Proposal: _____

f) Long Term Stability - 4 hr < 4.0% RSD

Determine after a maximum one-hour warm-up period. Use a 1-10 µg/L multi-element solution, automatically cycling between modes, measured once every 10 minutes, with oxides < 2.5 % RSD, and double charged < 3.0% RSD, without internal standardization.

Reference in Contractors Proposal: _____

g) Isotopic Ratio Stability < 0.1% RSD $^{107}\text{Ag}/^{109}\text{Ag}$

Use single-point peak hopping.

Reference in Contractors Proposal: _____

h) Mass Calibration Stability - 8 hr < 0.05 amu

Use a 1 µg/L multi-element solution containing ^7Li , ^{24}Mg , ^{115}In and ^{238}U .

Reference in Contractors Proposal: _____

i) Minimum Integration/Dwell time - ≤ 0.1 msec

Reference in Contractors Proposal: _____

j) Sensitivity

Use whichever mode gives the best results, but please report the mode used for each isotope. Set up with oxides < 2.5 % RSD, and double charged < 3.0% RSD.

·	⁹ Be	> 3 M cps /ppm (mega counts per second/parts per million)
·	²⁴ Mg	> 20 M cps/ppm
·	⁶⁸ Zn	> 80 M cps/ppm
·	¹⁰⁷ Ag	> 200 M cps/ppm
·	¹¹⁵ In	> 50 M cps/ppm
·	²³⁸ U	> 40 M cps/ppm

Reference in Contractors Proposal: _____

k) Detection Limits (DL)

The DL must be based on three times the standard deviation of the blank using a three (3) second integration time. Please report the mode and isotope used. Set up with oxides < 2.5 % RSD, and double charged < 3.0% RSD.

·	Be	< 1 ppt (parts per trillion)
·	Co	< 1 ppt
·	Se	< 5 ppt
·	Ag	< 1 ppt
·	In	< 0.5 ppt
·	U	< 0.5ppt

Reference in Contractors Proposal: _____

20. Safety

- a) The instrument must have safety interlocks to shut off the power to the spectrometer for operator safety and to prevent damage to the instrument itself.

Reference in Contractors Proposal: _____

- b) CSA certification on all electrical components.

Reference in Contractors Proposal: _____

Solicitation No. - N° de l'invitation

K8A70-139006/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

pv916

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

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

K8A70-139006

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ANNEX C

COMPLETE LIST OF AFFILIATES

(As per Standard Instructions, Clauses and Conditions Part 2)

Name _____ Position _____

Name _____ Position _____

Name _____ Position _____

Name _____ Position _____

Name _____ Position _____