Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

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

**PWGSC/TPSGC Acquisitions**
**1045 Main Street**
**1st Floor, Lobby C**
**Unit 108**
**Moncton, NB E1C 1H1**
**Bid Fax: (506) 851-6759**

# 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**

**Issuing Office - Bureau de distribution**

NB / PEI Division - Moncton Acquisitions Office
1045 Main Street
1st Floor, Lobby C
Unit 108
Moncton, NB E1C 1H1

**Title - Sujet**
Ion Chromatography System

| **Solicitation No. - N° de l'invitation** | **Date** |
|---|---|
| K8B11-160230/A | 2015-07-30 |

**Client Reference No. - N° de référence du client**
K8B11-160230

**GETS Reference No. - N° de référence de SEAG**
PW-$MCT-011-5054

| **File No. - N° de dossier** | **CCC No./N° CCC - FMS No./N° VME** |
|---|---|
| MCT-5-38031 (011) | |

**Solicitation Closes - L'invitation prend fin**
**at - à 02:00 PM**
**on - le 2015-09-10**

**Time Zone**
**Fuseau horaire**
Atlantic Daylight Saving Time ADT

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

| **Address Enquiries to: - Adresser toutes questions à:** | **Buyer Id - Id de l'acheteur** |
|---|---|
| Sharpe, Charlene A. | mct011 |

| **Telephone No. - N° de téléphone** | **FAX No. - N° de FAX** |
|---|---|
| (506) 851-3467 ( ) | (506) 851-6759 |

**Destination - of Goods, Services, and Construction:**
**Destination - des biens, services et construction:**
Environment Canada
Atlantic Laboratory for Environmental Testing
443 University Avenue
Moncton, NB E1A 3E9

**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** |
|---|---|
| See Herein | |

**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**

Canada

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## TABLE OF CONTENTS

## PART 1 - GENERAL INFORMATION

### 1.1 Requirement - Bid

The requirement is detailed under Article 6.2 of the resulting contract clauses.

*(Derived from - Provenant de: B4008T, 2014/06/26 )*

### 1.2 Debriefings

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

### 1.3 Trade Agreements

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

## PART 2 - BIDDER INSTRUCTIONS

### 2.1 Standard Instructions, Clauses and Conditions

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

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

The 2003 (2015/07/03) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

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

Delete: 60 days
Insert: 120 days

### 2.2 Submission of Bids

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

Due to the nature of the bid solicitation, **bids transmitted by facsimile or electronic mail (e-mail) to PWGSC will not be accepted.**

### 2.2.1 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least seven (7) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

*(Derived from - Provenant de: A9076T, 2007/05/25 )*

### 2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than seven (7) calendar days before the bid closing date. Enquiries received after that time may not be answered.

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

### 2.4 Applicable Laws

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

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

## PART 3 - BID PREPARATION INSTRUCTIONS

### 3.1 Bid Preparation Instructions

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

Section I: Technical Bid (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 at Annex B. The total amount of Applicable Taxes must be shown separately.

**3.1.1 Exchange Rate Fluctuation**

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

**Section III: Certifications**

Bidders must submit the certifications required under Part 5.

## PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

### 4.1 Evaluation Procedures

(a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.

(b) An evaluation team composed of representatives of Canada will evaluate the bids.

**4.1.1 Technical Evaluation**

**4.1.1.1 Mandatory Technical Criteria**

Mandatory Technical Criteria as specified in Table 3, Annex C.

#### 4.1.2 Financial Evaluation

*SACC Manual* Clause A0220T (*2014/06/26*), Evaluation of Price

### 4.2 Basis of Selection

#### 4.2.1 Basis of Selection - Mandatory Technical Criteria

| SACC Reference | Section | Date |
|---|---|---|
| A0031T | Basis of Selection - Mandatory Technical Criteria | 2010/08/16 |

## PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

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

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

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

### 5.1 Certifications Required with the Bid

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

#### 5.1.1 Declaration of Convicted Offences

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

### 5.2 Certifications Precedent to Contract Award and Additional Information

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

#### 5.2.1 Integrity Provisions – List of Names

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

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

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

### 5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

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

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

## PART 6 - RESULTING CONTRACT CLAUSES

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

### 6.1 Security Requirements

**6.1.1** There is **no security requirement** applicable to this Contract.

### 6.2 Requirement - Contract

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

*(Derived from - Provenant de: B4008C, 2014/06/26 )*

### 6.3 Standard Clauses and Conditions

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

### 6.3.1 General Conditions

2010A (2015/07/03), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

### 6.3.2 Supplemental General Conditions

4011 (2012/07/16) Goods – Medium Complexity, apply to and form part of the Contract.

## 6.4 Term of Contract

### 6.4.1 Delivery Date

All the deliverables must be received on or before March 31, 2016.

## 6.5 Authorities

### 6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Charlene Sharpe
Title: Acting Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Address: 1045 Main Street, Unit 108
Moncton, New Brunswick
E1C 1H1
Telephone: (506) 851-3467
Facsimile: (506) 851-6759
E-mail address: Charlene.Sharpe@pwgsc-tpsgc.gc.ca

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

### 6.5.2 Project Authority

The Project Authority for the Contract is: ***will be identified at contract award.***

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone : ___ ___ _____
Facsimile: ___ ___ _____
E-mail address: _____

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

### 6.5.3 Contractor's Representative *Bidders are to provide the following information:*

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone: _____

Facsimile: _____

E-mail: _____

## 6.6 Payment

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

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price, as specified in Annex B, 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.

*(Derived from - Provenant de: C0207C, 2013/04/25 )*

### 6.6.2 Limitation of Price

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

### 6.6.3 Terms of Payment

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

## 6.7 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.

*(Derived from - Provenant de: H5001C, 2008/12/12 )*

### 6.8 Certifications

#### 6.8.1 Compliance

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

### 6.9 Applicable Laws

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

### 6.10 Priority of Documents

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

(a) the Articles of Agreement;
(b) the supplemental general conditions 4011 (2012/07/16), Goods - Medium Complexity;
(c) the general conditions 2010A (2015/07/03), General Conditions - Goods (Medium Complexity);
(d) Annex A, Requirement; and
(e) the Contractor's bid dated _____

### 6.11 SACC Manual Clauses

| SACC Reference | Section | Date |
|---|---|---|
| A9068C | Government Site Regulations | 2010/01/11 |
| B1501C | Electrical Equipment | 2006/06/16 |
| B7500C | Excess Goods | 2006/06/16 |
| D0018C | Delivery and Unloading | 2007/11/30 |
| G1005C | Insurance | 2008/05/12 |

### 6.12 Shipping Instructions - Delivery at Destination

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

Delivered Duty Paid (DDP) Atlantic Laboratory for Environmental Testing, Environmental Science Center, 443 University Avenue, Moncton, NB E1A 3E9, Attention: Martin Leger, Incoterms 2000 for shipments from a commercial contractor.

*(Derived from - Provenant de: D4001C, 2008/12/12 )*

## ANNEX A - REQUIREMENT

### Fully automated Ion Chromatography system for the Atlantic Laboratory for Environmental Testing of Environment Canada in Moncton (NB)

**Background**

The Atlantic Laboratory for Environmental Testing (or ALET) is an Environment Canada accredited laboratory (ISO 17025) and is currently part of the Water Science and Technology Division of the Science and Technology Branch. ALET is also one of a group of five Environment Canada laboratories located in different regions across Canada. ALET is currently located at 443 University Avenue in Moncton (NB).

Under the current strategic orientation/ mandate, and in collaboration with the other Environment Canada laboratories within our Division, ALET's main purpose is to provide analytical support (Chemistry and Toxicology) to various scientific programs: mainly from across Canada. In recent past, the network of laboratories within our Division has also gradually moved toward a more harmonized structure of its operations, procedures and analytical methods offerings. The instrument hereby required falls into this harmonized plan supporting, amongst other programs, the analysis of water quality monitoring indicators across our Division. Thus, there is a requirement for all of the laboratories using ion chromatography to have similar technologies and offer similar detection limits. This allows the laboratories to be more efficient operationally by providing a mechanism through which the workload can be better distributed amongst the laboratories, when and where required and, also, during prolonged instruments maintenance and/or out of service repairs: since laboratories can act as back-ups for one another.

The ALET provides analytical support to: the Canadian Water Quality Monitoring Program, the Canadian Aquatic Biomonitoring Network (CABIN), the Long-Range Transboundary Air Pollution (LRTAP) Program and other programs such as the Atlantic Coastal Action Program (or ACAP) or other partnerships/ research projects entered into with other governmental organizations, non-governmental organizations, community groups or international agreements with other countries.

Currently, the ALET requires a replacement system offering the **same and/or better** capabilities of automated analysis, separation and detection to maintain the existing and expanding requirements for monitoring programs and harmonization needs. For these reasons, the laboratory is seeking an instrument that **meets or exceeds** existing instrument's specifications as enumerated in the following document.

**Request Statement**

Hence, this request for proposal is for the submission of tenders for a fully automated ion chromatography instrument system for the **simultaneous** determination (i.e. analysis, separation and detection) of major ions in various water matrices (i.e. surface waters, wastewaters and salt water samples) that are sent to our environmental analytical laboratory for research and monitoring testing. Namely, the system will allow measurements of the following contaminants: chloride, sulfate, bromide and nitrate ($NO_3$-N) & calcium, sodium, magnesium and potassium.

**Instructions for Manufacturer/ Supplier (Bidder)**

The bidder **must** answer **all** system requirements listed in this document.

The bidder **must not** simply answer by “Yes”, “No” or, “meet requirement” to indicate that they meet any of the enumerated requirements.

The bidder must substantiate their answers with supporting documentation (i.e. manuals, brochures, application notes and the likes). To facilitate this process, the purchaser is supplying a Table (in Word document) that the bidder **must use** when submitting their proposal. **An example as to how this Table (Table 3: Technical evaluation table to be used by the bidder(s)) is to be used is provided with this document**. The bidder is to fill a “**separate table**” for each separate instrument model they wish to submit as part of this request for proposal should more than one instrument model meet the purchaser’s requirements.

**Failure to comply with this request will result in an automatic dismissal of the proposal.**

It is the responsibility of the bidder to provide all pertinent and additional documentation that would clearly demonstrate that their instrument can meet (or exceed) the requirements listed in this request for proposal.

***IMPORTANT NOTE****: Proposals can only be evaluated based on the information provided at the time of proposal submission. For instance, we are not permitted to access and/ or review any additional information other than that provided by the bidder at the time of proposal submission to evaluate proposals: i.e. access to the internet, verifying references, etc. It is therefore to the bidder best interest to provide the purchaser with all the **relevant** information required so they can make an informed decision with respect to the system that best meet their requirements.*

*Furthermore, once the instrument has been received and installed, the bidder will have the responsibility to demonstrate through the analysis of real standards, reference materials and environmental samples that their instrument meets the purchaser specifications and performance criteria. Failure to demonstrate system performance on real samples (and not only artificially prepared samples) **may** result in the system being returned to the bidder at their expense.*

**Intellectual Property**

It is understood that all software (service packs, upgrades, etc.) provided with the instrument by the bidder is the sole property of the bidder but, that any and all data generated by the purchaser using this software remains the sole property of the purchaser: in this case, Her Majesty the Queen in Right of Canada, represented by the Minister of Public Works and Government Services Canada, (i.e. The Government of Canada)

**Proposal**

The following request for proposal is divided into three (3) parts with respect to the system requirements:

**Part 1** - Essential (or mandatory) requirements
**Part 2** - Additional system requirements
**Part 3** – Overall contract requirements

Note: **The essential requirements are all mandatory and will be identified within this document with the word "must"**. Any proposals not meeting all the essential (or mandatory) requirements will not be considered further.

**Proposal(s) Evaluation**

The responsive bidder who best meets the enumerated requirements in this request for proposal will be recommended for the procurement contract. This award will be evaluated on the basis of the answers provided by the bidder **using the Word document Table provided (Table 3: Technical evaluation table to be used by the bidder(s)),** including accompanying relevant supporting documentation with respect to the purchaser's requirements, demonstrating that the proposed system(s) **meets or exceeds** listed requirements in this request for proposal.

It is understood that, by submitting their proposal(s), bidder accepts and will respect all conditions set forth in this request for proposal should their proposal result in a successful award of contract. On the award of this contract, the bidder will ship the instrument to the following location:

**Atlantic Laboratory for Environmental Testing**
Environmental Science Center
443 University Avenue
Moncton, NB E1A 3E9
Attention: Martin Leger

## Part 1 – Essential Requirements

### 0.1. Ion chromatography system

**0.1.1.** The ion chromatography system **must** be able to **simultaneously** separate and analyze the following major ions (anions and cations) in various water matrices (i.e. surface waters, wastewaters and salt water samples) without requiring from the operator major modifications to the system components configurations that would lead to undesired downtime: bromide, chloride, nitrate ($NO_3$-N) and sulfate & calcium, magnesium, sodium and potassium

**0.1.2.** All components that will come into contact with the sample and the eluent **must** be inert and metal-free

**0.1.3.** The column compartment **must** be equipped with a column heater and be thermally stable: offering consistency, reproducibility and stability

**0.1.4.** The column compartment **must** offer protection from potential external interferences

**0.1.5.** The ion chromatography system **must** come with an **anion** exchange separator column appropriate for the parameters to be separated and analyzed: see "Performance Criteria" section (section 1.4) below

**0.1.6.** The ion chromatography system **must** come with a **cation** exchange separator column appropriate for the parameters to be separated and analyzed: see "Performance Criteria" section (section 1.4) below

**0.1.7.** An appropriate "**anion** guard" column to protect the separator column from fouling by particulates or organics **must** come with the ion chromatography system; guard column **must** be easily replaceable and **must** offer protection to the analytical column and extend its useful life

**0.1.8.** An appropriate "**cation** guard" column to protect the separator column from fouling by particulates or organics **must** come with the ion chromatography system; guard column **must** be easily replaceable and **must** offer protection to the analytical column and extend its useful life

**0.1.9.** The ion chromatography system **must** come with an "electrolytic/ electronic" suppression system

**0.1.10.** The pump(s) of the ion chromatography system **must** be of a dual-piston design

**0.1.11.** The pump(s) of the ion chromatography system **must** be pulse free (minimum residual pulsation)

**0.1.12.** The pump(s) **must** offer high accuracy, precision and flow stability

**0.1.13.** The pump(s) **must** also provide the ability to support different column formats

**0.1.14.** The ion chromatography system **must** be equipped with an on-line eluent generator system guaranteeing a reproducible mobile phase

**0.1.15.** The ion chromatography system **must** offer the ability to do both isocratic and gradient elutions

**0.2. Auto sampler**

**0.2.1.** The ion chromatography system **must** come with an auto sampler module fully compatible and controllable via the main system software

**0.2.2.** The auto sampler shall have an individual filter for each sample

**0.3. Detector**

**0.3.1.** The ion chromatography system **must** come with a conductivity detector

**0.3.2.** The conductivity detector **must** cover the range suitable to achieve the method detection limits listed below (or better) in the performance criteria section (section 1.4) of this document for the stated parameters

**0.3.3.** The conductivity detector **must** be thermally stable (unaffected by temperature variations)

**0.3.4.** The conductivity detector **must** provide low-noise and a stable baseline

**0.3.5.** The conductivity detector **must** be responsive and offer accurate and precise conductivity measurements throughout the analysis for the stated parameters listed in the performance criteria section (section 1.4) of this document

**0.3.6.** The conductivity detector **must** offer a wide dynamic range for detecting analytes with large concentration variations within the same sample

## 0.4. Performance Criteria

**0.4.1.** The ion chromatography system **must** be able to cover the following concentration ranges and, achieve the method detection limits for the parameters listed below in table 1 and table 2, under real analysis conditions and with real environmental samples:

**Table 1: CONCENTRATION RANGE AND METHOD DETECTION LIMITS FOR ANIONS: BROMIDE, CHLORIDE, NITRATE ($NO_3$-N) AND SULFATE**

| PARAMETER | RANGE | METHOD DETECTION LIMIT |
|---|---|---|
| | *mg/L* | *mg/L* |
| Bromide | 0.03 - 4 | 0.03 |
| Chloride | 0.1 to 20 | 0.1 |
| Nitrate ($NO_3$-N) | 0.01 to 1.6 | 0.01 |
| Sulfate | 0.1 to 20 | 0.1 |

**Table 2: CONCENTRATION RANGE AND METHOD DETECTION LIMITS FOR CATIONS: CALCIUM, MAGNESIUM, SODIUM AND POTASSIUM**

| PARAMETER | RANGE | METHOD DETECTION LIMIT |
|---|---|---|
| | *mg/L* | *mg/L* |
| | | |
| Calcium | 0.01 – 2.0 | 0.01 |
| Magnesium | 0.01 – 1.0 | 0.01 |
| Sodium | 0.01 – 2.0 | 0.01 |
| Potassium | 0.01 – 1.0 | 0.01 |

**0.4.2.** The ion chromatography system **must** be able to meet criteria for well-known standard methods **such as**:

**0.4.2.1.** Standard Methods 4110 B. Ion Chromatography with Chemical Suppression of Eluent Conductivity

**0.4.2.2.** US EPA Method 300.0 Determination of Inorganic Anions By Ion Chromatography

**0.4.2.3.** ASTM Standards Method D4327-97 Standard Test Method for Anions in Water by Chemically Suppressed Ion Chromatography

**0.4.2.4.** ASTM Standards Method D6919-09 Standard Test Method for Determination of Dissolved Alkali and Alkaline Earth Cations and Ammonium in Water and Wastewater by Ion Chromatography

## 0.5. Software

**0.5.1.** The bidder **must** offer software packages to control, monitor, record and process all procedural variables and acquisition data from the ion chromatography system

**0.5.2.** This software **must** be of the most recent English version and be provided with the system (at no extra cost) and meet the following requirements:

**0.5.2.1.** The software **must** operate and be supported using the Windows 7 Pro version or higher

**0.5.2.2.** The software **must** allow for multitasking using other windows programs on one computer

**0.5.2.3.** The software **must** save a copy of the method and instrument parameters in distinct file naming folders for audit trail purposes

**0.5.2.4.** The software **must** allow data transfer via an electronic spreadsheet such as Excel

**0.5.2.5.** The ion chromatography system **must** come with **two** (2) additional licenses of the software to allow for remote (offline) data analysis/ manipulation

**0.6. Computer**

**0.6.1.** The bidder **must** provide the instrument with a compatible computer system package that will have the following components:

**0.6.1.1.** HP_Z230 Workstation Tower **or equivalent**, i5-4570 3.2GHz, 8GB RAM, 500GB HDD, HD 4600, Win 7 Pro (or higher), 4GB RAM Memory - DIMM 240-pin - DDR3 - 1600 MHz / PC3-12800 - unbuffered - non-ECC, 1TB Hard Drive SATA-600 - 7200 rpm, SATA 16x DVD±RW (±R DL) / DVD-RAM - Serial ATAinternal-5.25" Black, Non NMSO STARTECH_2 Port Low Profile Native RS232 PCI, Express Serial Card with 16550 UART, Non NMSO Intel I210-T1 - Network adapter - PCI Express 2.1 x1 low profile - Gigabit Ethernet x 1, NMICRO Image Installation, Three Year On-Site Warranty

**0.6.1.2.** Minimum of 20” VA+LED, Black 1920x1080 5000:1 250cd/$m^2$ 4ms D-sub/DVI/DP Speakers, USB Hub, Pivot, Swivel, Tilt, Height

**0.7. Accessories/Consumables**

**0.7.1.** The bidder **must** provide a starter/consumables kit/ spare parts with the instrument. This kit will include but will not necessarily be limited to the following parts:

**0.7.1.1.** Proper tools (tools box) to perform regular replacements of consumables and regular user maintenance

**0.7.1.2.** One (1) spare new analytical separator column for **anion** separation and analysis (part no. to be specified by the purchaser at the time of award of contract)

**0.7.1.3.** One (1) spare new analytical separator column for **cation** separation and analysis (part no. to be specified by the purchaser at the time of award of contract)

**0.7.1.4.** One (1) spare new **anion** guard column (part no. to be specified by the purchaser at the time of award of contract)

**0.7.1.5.** One (1) spare new **cation** guard column (part no. to be specified by the purchaser at the time of award of contract)

**0.7.2.** Or, a kit that would comprise all of the above

**0.8. Training**

**0.8.1.** Following the installation, the bidder **must** provide a three (3) days **basic** training on the use of the instrument and software/controller that runs the system at the purchaser location. This training will include but will not be limited to, an overview of hardware components, software/controller functions and a session on hardware and preventive maintenance. This will include an electronic user guide in English

**0.8.2.** Within the first year following the acquisition, the bidder **must** provide three (3) days **advanced** training on the use of the instrument and software/controller that runs the system at the purchaser location. This training will be a complement to the three (3) days basic training given earlier following installation. The date of the training will be determined by both parties and subject to the company's application specialist (trainer) availability/ schedule

## Part 2 - Additional System Requirements (Options)

**2.1** Part 2 will **not** be used as part of the overall evaluation of the bid. The additional information provided by the bidder on these options will only be used by the purchaser in evaluating whether or not any of these options are worth purchasing should any additional funding is available at the time of acquisition.

**2.1.1** The bidder **must** provide a **separate** options list with associated costs, in Canadian dollars, for instrument options and consumable parts available for their proposed instrument. This will also include cost for any additional software required for these options (if applicable), and upgrades (where necessary)

**2.1.2** The bidder **must** provide the purchaser with the cost of an extended warranty, in Canadian dollars, for their system including the details of this extended warranty contract

## Part 3- Overall Contract Requirements

**3.1 System Requirements**

**3.1.1** System **must** be delivered **before March 31 2016**

**3.1.2** System **must** include a list of all necessary components for a fully automated ion chromatography system for unattended operation

**3.1.3** The ion chromatography system **must** be equipped to operate on 100–120 VAC, 50/60 Hz

**3.1.4** The entire system **must** meet the Canadian Standards Association electrical requirements (for laboratory use)

**3.1.5** The equipment shall be capable of operating between 20 °C and 30 °C, and at a relative humidity between 20% and 70%, non-condensing

### 3.2 The Bidder Requirements/Obligations

**3.2.1** Upon the granting of the contract award and prior to delivery of the instrument, the bidder **must** provide the purchaser with a pre-installation manual and checklist

**3.2.2** The bidder that will be awarded the sales contract **must** install said instrument and demonstrate instrumentation performance and the ability of the system to meet the purchaser's performance specifications within the purchaser's laboratory spaces

**3.2.3** System **must** be supplied with a **minimum** of one (1) year service warranty including **parts, labor and travel** effective from the date of installation and will include one (1) preventive maintenance (PM) visit, **at no additional charge**, to our laboratory

**3.2.4** During the warranty period, the response time for service calls and the time for restoring the equipment to serviceable condition **must** not exceed ten (10) business days

**3.2.5** The supplier **must** guarantee a response by telephone or by email within 24 hours following a service call

**3.2.6** The supplier **must** have qualified technical personnel to perform on-site service

**3.2.7** Service **must** be provided during business hours (9 a.m. to 5 p.m.), Monday to Friday, except statutory holidays

**3.2.8** The supplier **must** supply normal replacement parts within a maximum period of ten (10) business days, effective from the date the said parts are ordered

**3.2.9** Qualified Applications Specialists **must** be available for method development, customized on-site or on-line applications support

**3.2.10** All quotations **must** be in **Canadian dollars**

Table 3 below provides the bidder with an example as to how to use and fill the "Technical evaluation table to be used by the bidder(s)" in answering the Purchaser requirements as listed that Table (provided)

**Important Note:** The bidder is to fill a "**separate"** table for each separate instrument model they wish to submit as part of this request for proposal should more than one instrument model meet the purchaser's requirements.

**Table 3: Example**

| 1. Ion Chromatography System | | Comply Yes/No | Substantiation |
|---|---|---|---|
| 1.1 | Purchaser requirements listed in this column | | Bidder is to list, in this column, the actual name(s), title(s) or code(s) of their documentation with associated page(s), bullet point(s) and/ or section(s), within their documentation containing the information, that shows/ confirms that the proposed system meets the purchaser's corresponding requirement.<br><br>Example:<br><br>Brochure #3: Determination of chloride by ion chromatography; page 5; bullet 3.2<br><br>Hardware manual for model x ion chromatography system; manual identification number x; page x; 2nd paragraph<br><br>Application Note title and/ or identification number x: page x; Table x; diagram x. |

## ANNEX B – BASIS OF PAYMENT

The Contractor is to provide the following items, in the following quantities, to Environment Canada, Atlantic Laboratory for Environmental Testing (ALET) located in Moncton, NB, New Brunswick.

All deliverables must be received on or before March 31, 2016.

| Item | Description | Quantity | Price |
|---|---|---|---|
| 1 | ION Chromatography System as per specifications in Annex A - Requirement. | 1 lot | $_____ |
| 2 | Shipping Charges | 1 lot | $_____ |
| 3 | Installation Fees | 1 lot | $_____ |
| 4 | Basic Training Fees | 1 lot | $_____ |
| 5 | Advanced Training Fees | 1 lot | $_____ |
| | **Sub-total** | | **$_____** |
| | **Applicable taxes (HST at 13%)** | | **$_____** |
| | **Total Costs** | | **$_____** |

## ANNEX C – TABLE 3, TECHNICAL EVALUATION CRITERIA

Table 3: Technical evaluation table to be used by the bidder(s)

| Part 1 – Essential Requirements | | | |
|---|---|---|---|
| **1.1. Ion Chromatography System** | | **Comply Yes/No** | **Substantiation** |
| 1.1.1 | The ion chromatography system **must** be able to **simultaneously** separate and analyze the following major ions (anions and cations) in various water matrices (i.e. surface waters, wastewaters and salt water samples) without requiring from the operator major modifications to the system components configurations that would lead to undesired downtime: bromide, chloride, nitrate ($NO_3$-N) and sulfate & calcium, magnesium, sodium and potassium | | |
| 1.1.2 | All components that will come into contact with the sample and the eluent **must** be inert and metal-free | | |
| 1.1.3 | The column compartment **must** be equipped with a column heater and be thermally stable: offering consistency, reproducibility and stability | | |
| 1.1.4 | The column compartment **must** offer protection from potential external interferences | | |
| 1.1.5 | The ion chromatography system **must** come with an **anion** exchange separator column appropriate for the parameters to be separated and analyzed: see “Performance Criteria” section (section 1.4) below | | |
| 1.1.6 | The ion chromatography system **must** come with a **cation** exchange separator column appropriate for the parameters to be separated and analyzed: see “Performance Criteria” section (section 1.4) below | | |
| 1.1.7 | An appropriate “**anion** guard” column to protect the separator column from fouling by particulates or organics **must** come with the ion chromatography system; guard column **must** be easily replaceable and **must** offer protection to the analytical column and extend its useful life | | |

| | | | |
|---|---|---|---|
| 1.1.8 | An appropriate "**cation** guard" column to protect the separator column from fouling by particulates or organics **must** come with the ion chromatography system; guard column **must** be easily replaceable and **must** offer protection to the analytical column and extend its useful life | | |
| 1.1.9 | The ion chromatography system **must** come with an "electrolytic/ electronic" suppression system | | |
| 1.1.10 | The pump(s) of the ion chromatography system **must** be of a dual-piston design | | |
| 1.1.11 | The pump(s) of the ion chromatography system **must** be pulse free (minimum residual pulsation) | | |
| 1.1.12 | The pump(s) **must** offer high accuracy, precision and flow stability | | |
| 1.1.13 | The pump(s) **must** also provide the ability to support different column formats | | |
| 1.1.14 | The ion chromatography system **must** be equipped with an on-line eluent generator system guaranteeing a reproducible mobile phase | | |
| 1.1.15 | The ion chromatography system **must** offer the ability to do both isocratic and gradient elutions | | |
| **1.2. Auto sampler** | | **Comply Yes/No** | **Substantiation** |
| 1.2.1 | The ion chromatography system **must** come with an auto sampler module fully compatible and controllable via the main system software | | |
| 1.2.2 | The auto sampler shall have an individual filter for each sample | | |
| **1.3. Detector** | | **Comply Yes/No** | **Substantiation** |
| 1.3.1 | The ion chromatography system **must** come with a conductivity detector | | |
| 1.3.2 | The conductivity detector **must** cover the range suitable to achieve the method detection limits listed below (or better) in the performance criteria section (section 1.4) of this document for the stated parameters | | |
| 1.3.3 | The conductivity detector **must** be thermally stable (unaffected by temperature variations) | | |

| | | | |
|---|---|---|---|
| 1.3.4 | The conductivity detector **must** provide low-noise and a stable baseline | | |
| 1.3.5 | The conductivity detector **must** be responsive and offer accurate and precise conductivity measurements throughout the analysis for the stated parameters listed in the performance criteria section (section 1.4) of this document | | |
| 1.3.6 | The conductivity detector **must** offer a wide dynamic range for detecting analytes with large concentration variations within the same sample | | |
| **1.4. Performance Criteria** | | **Comply Yes/No** | **Substantiation** |
| 1.4.1 | The ion chromatography system **must** be able to cover the following concentration ranges and, achieve the method detection limits for the parameters listed below in table 1 and table 2, under real analysis conditions and with real environmental samples:<br><br>****Refer to Table 1 and Table 2 below**** | | ****Use Table 1 and Table 2 below**** |
| 1.4.2 | The ion chromatography system **must** be able to meet criteria for well-known standard methods **such as**: | | |
| 1.4.2.1 | Standard Methods 4110 B. Ion Chromatography with Chemical Suppression of Eluent Conductivity | | |
| 1.4.2.2 | US EPA Method 300.0 Determination of Inorganic Anions By Ion Chromatography | | |
| 1.4.2.3 | ASTM Standards Method D4327-97 Standard Test Method for Anions in Water by Chemically Suppressed Ion Chromatography | | |
| 1.4.2.4 | ASTM Standards Method D6919-09 Standard Test Method for Determination of Dissolved Alkali and Alkaline Earth Cations and Ammonium in Water and Wastewater by Ion Chromatography | | |
| **1.5. Software** | | **Comply Yes/No** | **Substantiation** |
| 1.5.1 | The bidder **must** offer software packages to control, monitor, record and process all procedural variables and acquisition data from the ion chromatography system | | |

| | | | |
|---|---|---|---|
| 1.5.2 | This software **must** be of the most recent English version and be provided with the system (at no extra cost) and meet the following requirements: | | |
| 1.5.2.1 | The software **must** operate and be supported using the Windows 7 Pro version or higher | | |
| 1.5.2.2 | The software **must** allow for multitasking using other windows programs on one computer | | |
| 1.5.2.3 | The software **must** save a copy of the method and instrument parameters in distinct file naming folders for audit trail purposes | | |
| 1.5.2.4 | The software **must** allow data transfer via an electronic spreadsheet such as Excel | | |
| 1.5.2.5 | The ion chromatography system **must** come with **two** (2) additional licenses of the software to allow for remote (offline) data analysis/ manipulation | | |
| **1.6. Computer** | | **Comply Yes/No** | **Substantiation** |
| 1.6.1 | The bidder **must** provide the instrument with a compatible computer system package that will have the following components: | | |
| 1.6.1.1 | HP_Z230 Workstation Tower **or equivalent**, i5-4570 3.2GHz, 8GB RAM, 500GB HDD, HD 4600, Win 7 Pro (or higher), 4GB RAM Memory - DIMM 240-pin - DDR3 - 1600 MHz / PC3-12800 - unbuffered - non-ECC, 1TB Hard Drive SATA-600 - 7200 rpm, SATA 16x DVD±RW (±R DL) / DVD-RAM -Serial ATAinternal-5.25" Black, Non NMSO STARTECH_2 Port Low Profile Native RS232 PCI, Express Serial Card with 16550 UART, Non NMSO Intel I210-T1 - Network adapter - PCI Express 2.1 x1 low profile - Gigabit Ethernet x 1, NMICRO Image Installation, Three Year On-Site Warranty | | |
| 1.6.1.2 | Minimum of 20” VA+LED, Black 1920x1080 5000:1 250cd/$m^2$ 4ms D-sub/DVI/DP Speakers, USB Hub, Pivot, Swivel, Tilt, Height | | |

| **1.7. Accessories / Consumables** | | **Comply Yes/No** | **Substantiation** |
|---|---|---|---|
| 1.7.1 | The bidder **must** provide a starter/consumables kit/ spare parts with the instrument. This kit will include but will not necessarily be limited to the following parts: | | |
| 1.7.1.1 | Proper tools (tools box) to perform regular replacements of consumables and regular user maintenance | | |
| 1.7.1.2 | One (1) spare new analytical separator column for **anion** separation and analysis (part no. to be specified by the purchaser at the time of award of contract) | | |
| 1.7.1.3 | One (1) spare new analytical separator column for **cation** separation and analysis (part no. to be specified by the purchaser at the time of award of contract) | | |
| 1.7.1.4 | One (1) spare new **anion** guard column (part no. to be specified by the purchaser at the time of award of contract) | | |
| 1.7.1.5 | One (1) spare new **cation** guard column (part no. to be specified by the purchaser at the time of award of contract) | | |
| 1.7.2 | Or, a kit that would comprise all of the above | | |
| **1.8. Training** | | **Comply Yes/No** | **Substantiation** |
| 1.8.1 | Following the installation, the bidder **must** provide a three (3) days **basic** training on the use of the instrument and software/controller that runs the system at the purchaser location. This training will include but will not be limited to, an overview of hardware components, software/controller functions and a session on hardware and preventive maintenance. This will include an electronic user guide in English | | |

| | | | |
|---|---|---|---|
| 1.8.2 | Within the first year following the acquisition, the bidder **must** provide three (3) days **advanced** training on the use of the instrument and software/controller that runs the system at the purchaser location. This training will be a complement to the three (3) days basic training given earlier following installation. The date of the training will be determined by both parties and subject to the company's application specialist (trainer) availability/ schedule | | |
| **Part 2 – Additional System Requirements (Options)** | | | |
| | | **Comply Yes/No** | **Substantiation** |
| 2.1 | Part 2 will **not** be used as part of the overall evaluation of the bid. The additional information provided by the bidder on these options will only be used by the purchaser in evaluating whether or not any of these options are worth purchasing should any additional funding is available at the time of acquisition. | | |
| 2.1.1 | The bidder **must** provide a **separate** options list with associated costs, in Canadian dollars, for instrument options and consumable parts available for their proposed instrument. This will also include cost for any additional software required for these options (if applicable), and upgrades (where necessary) | | |
| 2.1.2 | The bidder **must** provide the purchaser with the cost of an extended warranty, in Canadian dollars, for their system including the details of this extended warranty contract | | |
| **Part 3 – Overall Contract Requirements** | | | |
| **3.1 System Requirements** | | **Comply Yes/No** | **Substantiation** |
| 3.1.1 | System **must** be delivered **before March 31 2016** | | |
| 3.1.2 | System **must** include a list of all necessary components for a fully automated ion chromatography system for unattended operation | | |
| 3.1.3 | The ion chromatography system **must** be equipped to operate on 100–120 VAC, 50/60 Hz | | |

| | | | |
|---|---|---|---|
| 3.1.4 | The entire system **must** meet the Canadian Standards Association electrical requirements (for laboratory use) | | |
| 3.1.5 | The equipment shall be capable of operating between 20 °C and 30 °C, and at a relative humidity between 20% and 70%, non-condensing | | |
| **3.2 The Bidder Requirements/Obligations** | | **Comply Yes/No** | **Substantiation** |
| 3.2.1 | Upon the granting of the contract award and prior to delivery of the instrument, the bidder **must** provide the purchaser with a pre-installation manual and checklist | | |
| 3.2.2 | The bidder that will be awarded the sales contract **must** install said instrument and demonstrate instrumentation performance and the ability of the system to meet the purchaser's performance specifications within the purchaser's laboratory spaces | | |
| 3.2.3 | System **must** be supplied with a **minimum** of one (1) year service warranty including **parts, labor and travel** effective from the date of installation and will include one (1) preventive maintenance (PM) visit, **at no additional charge**, to our laboratory | | |
| 3.2.4 | During the warranty period, the response time for service calls and the time for restoring the equipment to serviceable condition **must** not exceed ten (10) business days | | |
| 3.2.5 | The supplier **must** guarantee a response by telephone or by email within 24 hours following a service call | | |
| 3.2.6 | The supplier **must** have qualified technical personnel to perform on-site service | | |
| 3.2.7 | Service **must** be provided during business hours (9 a.m. to 5 p.m.), Monday to Friday, except statutory holidays | | |
| 3.2.8 | The supplier **must** supply normal replacement parts within a maximum period of ten (10) business days, effective from the date the said parts are ordered | | |

| | | | |
|---|---|---|---|
| 3.2.9 | Qualified Applications Specialists **must** be available for method development, customized on-site or on-line applications support | | |
| 3.2.10 | All quotations **must** be in **Canadian dollars** | | |

**Table 1: CONCENTRATION RANGE AND METHOD DETECTION LIMITS FOR ANIONS: BROMIDE, CHLORIDE, NITRATE (NO3-N) AND SULFATE**

| PARAMETER | RANGE | METHOD DETECTION LIMIT | Comply Yes/No | Substantiation |
|---|---|---|---|---|
| | mg/L | mg/L | | |
| | | | | |
| Bromide | 0.03 - 4 | 0.03 | | |
| Chloride | 0.1 – 2.0 | 0.1 | | |
| Nitrate ($NO_3$ - N) | 0.01 – 1.6 | 0.01 | | |
| Sulfate | 0.1 - 20 | 0.1 | | |

**Table 2: CONCENTRATION RANGE AND METHOD DETECTION LIMITS FOR CATIONS: CALCIUM, MAGNESIUM, SODIUM AND POTASSIUM**

| PARAMETER | RANGE | METHOD DETECTION LIMIT | Comply Yes/No | Substantiation |
|---|---|---|---|---|
| | mg/L | mg/L | | |
| | | | | |
| Calcium | 0.01 – 2.0 | 0.01 | | |
| Magnesium | 0.01 – 1.0 | 0.01 | | |
| Sodium | 0.01 – 2.0 | 0.01 | | |
| Potassium | 0.01 – 1.0 | 0.01 | | |

**ANNEX D - COMPLETE LIST OF EACH INDIVIDUAL WHO ARE CURRENTLY DIRECTORS AND/OR OWNERS OF THE BIDDER**

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

***NOTE TO BIDDERS: WRITE DIRECTORS' AND/OR OWNERS' SURNAMES AND GIVEN NAMES***