



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

Public Works and Government Services / Travaux
publics et services gouvernementaux
Kingston Procurement
Des Acquisitions Kingston
86 Clarence Street, 2nd floor
Kingston
Ontario
K7L 1X3
Bid Fax: (613) 545-8067

**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 LC-QQQ-MS	
Solicitation No. - N° de l'invitation KW405-190288/A	Date 2018-12-13
Client Reference No. - N° de référence du client 500039959	
GETS Reference No. - N° de référence de SEAG PW-\$KIN-655-7685	
File No. - N° de dossier KIN-8-50049 (655)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-01-23	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Semple, Patrick	Buyer Id - Id de l'acheteur kin655
Telephone No. - N° de téléphone (613) 530-3117 ()	FAX No. - N° de FAX (613) 545-8067
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: ECCC ATTN: ENZO BARRESI 867 LAKESHORE RD BURLINGTON Ontario L7S 1A1 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

Public Works and Government Services / Travaux publics et
services gouvernementaux
Kingston Procurement
Des Acquisitions Kingston
86 Clarence Street, 2nd floor
Kingston
Ontario
K7L 1X3

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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Client Ref. No. - N° de réf. du client
KW405-190288

Amd. No. - N° de la modif.
File No. - N° du dossier
KIN-8-50049

Buyer ID - Id de l'acheteur
kin655
CCC No./N° CCC - FMS No./N° VME

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PART 1 - GENERAL INFORMATION

1.1 Statement of Work

The Work to be performed is detailed under Article 6.2 of the resulting contract clauses.

1.2 Debriefings

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

1.3 Trade Agreements

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Canadian Free Trade Agreement (CFTA).

1.4 epost Connect service

This bid solicitation allows bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

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) (<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](#) (2018-05-22) 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: 90 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 in the bid solicitation.

Email address for epost Connect service:

TPSGC.orreceptiondessoumissions-orbidreceiving.PWGSC@tpsgc-pwgsc.gc.ca

Bids/Offeres will be not be accepted if emailed directly to this email address. This email is to initiate an ePost Connect conversation, as detailed in the Standard Instructions.

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

NOTE: Instrument test results will be used to assess performance of the instruments specified in bids for R1, R2, R3 and R4 at Annex D. All tests must be performed and submitted with the bid at bid closing to be evaluated against the point rated requirements. Samples and standards must be requested from Patrick Semple (Patrick.semple@tpsgc-pwgsc.gc.ca) by **JANUARY 4, 2019** to perform these tests.

2.3 Enquiries - Bid Solicitation

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

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

2.4 Applicable Laws

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

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

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. Bidders must provide their bid in a single transmission. The epost Connect service has the capacity to receive multiple documents, up to 1GB per individual attachment.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid
Section II: Financial Bid
Section III: Certifications

If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its 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 copies)

If the Bidder is simultaneously providing copies of its bid using multiple acceptable delivery methods, and if there is a discrepancy between the wording of any of these copies and the electronic copy provided through epost Connect service, the wording of the electronic copy provided through epost Connect service will have priority over the wording of the other copies.

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

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 hard copy 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](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573>). 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.

3.1.1 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex “E” Electronic Payment Instruments, to identify which ones are accepted.

If Annex “E” Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.2 Exchange Rate Fluctuation

[C3011T](#) (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications and additional information 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

The Mandatory Technical Evaluation Criteria are detailed in Annex C.

4.1.1.2 Point Rated Technical Criteria

The point rated technical evaluation criteria are detailed in Annex D.

4.1.2 Financial Evaluation

4.1.2.1 Mandatory Financial Criteria

(a) The Bidder must provide in Pricing Basis "A" of Annex "B", the make and model number of the equipment and list all additional equipment and features that are not included on the base model, but are included to meet the Requirement.

(b) Bidder must complete and submit with its bid, Annex "B" – Basis of Payment, in Canadian funds, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

4.1.2.2 The price used in the evaluation will be the Evaluated Price, which is calculated as follows:

(a) Evaluated Price is the sum of the prices for Pricing Basis "A".

4.2 Basis of Selection - Highest Combined Rating of Technical Merit and Price

1. To be declared responsive, a bid must:

- a. comply with all the requirements of the bid solicitation; and
- b. meet all mandatory criteria; and
- c. obtain the required minimum points specified for Rated Criteria R1 – R4 and R5 – R7 for the technical evaluation, and
- d. obtain the required minimum of **358** points overall for the technical evaluation criteria which are subject to point rating.

The rating is performed on a scale of **856** points.

2. Bids not meeting (a) or (b) or (c) and (d) will be declared non-responsive.
3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60 % for the technical merit and 40 % for the price.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 60 %.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40 %.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equals 856 and the lowest evaluated price is \$450,000.00 (450).

Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)				
		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		1,088/1280	832/1280	872/1280
Bid Evaluated Price		\$550,000.00	\$500,000.00	\$450,000.00
Calculations	Technical Merit Score	$728/856 \times 60 = 51.03$	$556/856 \times 60 = 38.97$	$582/856 \times 60 = 40.79$
	Pricing Score	$450/550 \times 40 = 32.73$	$450/500 \times 40 = 36.00$	$450/450 \times 40 = 40.00$
Combined Rating		83.76	74.97	80.76
Overall Rating		1st	3rd	2nd

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. Unless specified otherwise, 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 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-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 – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

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 available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

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 the Contract.

6.2 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A".

6.3 Standard Clauses and Conditions

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

6.3.1 General Conditions

[2010A](#) (2018-06-21), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

The 2010A (2018-06-21), General Conditions - Goods (Medium Complexity) is appended with Section 32 - Intellectual Property Infringement and Royalties, as follows:

1. The Contractor represents and warrants that, to the best of its knowledge, neither it nor Canada will infringe any third party's intellectual property rights in performing or using the Work, and that Canada will have no obligation to pay royalties of any kind to anyone in connection with the Work.
2. If anyone makes a claim against Canada or the Contractor concerning intellectual property infringement or royalties related to the Work, that Party agrees to notify the other Party in writing immediately. If anyone brings a claim against Canada, according to [Department of Justice Act](#), R.S. 1985, c. J-2, the Attorney General of Canada must have the regulation and conduct of all litigation for or against Canada, but the Attorney General may request that the Contractor defend Canada against the claim. In either case, the Contractor agrees to participate fully in the defence and any settlement negotiations and to pay all costs, damages and legal costs incurred or payable as a result of the claim, including the amount of any settlement. Both Parties agree not to settle any claim unless the other Party first approves the settlement in writing.
3. The Contractor has no obligation regarding claims that were only made because:
 - a. Canada modified the Work or part of the Work without the Contractor's consent or used the Work or part of the Work without following a requirement of the Contract; or
 - b. Canada used the Work or part of the Work with a product that the Contractor did not supply under the Contract (unless that use is described in the Contract or the manufacturer's specifications); or
 - c. the Contractor used equipment, drawings, specifications or other information supplied to the Contractor by Canada (or by someone authorized by Canada); or
 - d. the Contractor used a specific item of equipment or software that it obtained because of specific instructions from the Contracting Authority; however, this exception only applies if the Contractor has included the following language in its own contract with the supplier of that equipment or software: "[Supplier name] acknowledges that the purchased items will be used by the Government of Canada. If a third party claims that equipment or software supplied under this contract infringes any intellectual property right, [supplier name], if requested to do so by either [Contractor name] or Canada, will defend both [Contractor name] and Canada against that claim at its own expense and will pay all costs, damages and legal fees payable as a result of that infringement." Obtaining this protection from the supplier is the Contractor's responsibility and, if the Contractor does not do so, it will be responsible to Canada for the claim.
4. If anyone claims that, as a result of the Work, the Contractor or Canada is infringing its intellectual property rights, the Contractor must immediately do one of the following:

- a. take whatever steps are necessary to allow Canada to continue to use the allegedly infringing part of the Work; or
- b. modify or replace the Work to avoid intellectual property infringement, while ensuring that the Work continues to meet all the requirements of the Contract; or
- c. take back the Work and refund any part of the Contract Price that Canada has already paid.

If the Contractor determines that none of these alternatives can reasonably be achieved, or if the Contractor fails to take any of these steps within a reasonable amount of time, Canada may choose either to require the Contractor to do (c), or to take whatever steps are necessary to acquire the rights to use the allegedly infringing part(s) of the Work itself, in which case the Contractor must reimburse Canada for all the costs it incurs to do so.

6.3.2 Supplemental General Conditions

- (a) 4003 (2010-08-16), Licensed Software; and
- (b) 4004 (2013-04-25), Maintenance and Support Services for Licensed Software,

apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Period of the Contract

The period of the Contract is from date of Contract to 31 March, 2020 inclusive.

6.4.2 Delivery Date

The initial deliverables must be received on or before 31 March, 2019.

6.4.3 Optional Goods

The Contractor grants to Canada the irrevocable option to acquire the goods described at Annex B of the Contract under the same 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 at any time before the expiry of the Contract by sending a written notice to the Contractor.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Patrick Semple
Title: Supply Specialist

Solicitation No. - N° de l'invitation
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Client Ref. No. - N° de réf. du client
KW405-190288

Amd. No. - N° de la modif.
File No. - N° du dossier
KIN-8-50049

Buyer ID - Id de l'acheteur
kin655
CCC No./N° CCC - FMS No./N° VME

Organisation: Public Works and Government Services
Canada, Acquisitions Branch
Address: 86 Clarence Street,
Kingston, Ontario, K7L
1X3
Telephone: 613-530-3117
Facsimile: 613-545-8067
E-mail address: patrick.semple@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.

6.5.2 Project Authority

The Project Authority for the Contract is: (to be completed at contract award)

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

Telephone: _____
Facsimile: _____
E-mail address: _____

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

6.5.3 Contractor's Representative (to be completed at contract award)

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

Telephone : _____
Facsimile: _____
E-mail address: _____

6.6 Payment

6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price, as specified in Annex C – Pricing Tables for a cost of \$_____ **(amount to be inserted at contract award)**. Customs duties are included and Applicable Taxes are extra.

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

6.6.2 Method of Payment

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

6.6.3 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Direct Deposit (Domestic and International);
- b. Wire Transfer (International Only);

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.
 - b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.8 Certifications and Additional Information

6.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

6.9 Applicable Laws

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

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
4003 (2010-08-16) Licensed Software;
4004 (2013-04-25) Maintenance and Support Services for Licensed Software;
- (c) the general conditions 2010A (2018-06-21) Goods (medium complexity);
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) the Contractor's bid dated _____.

6.11 Inspection and Acceptance

The Project Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

6.12 SACC Manual Clauses

G1005C (2016-01-28) Insurance – No specific Requirement

ANNEX "A"

STATEMENT OF WORK

Requirements for a Liquid Chromatography Triple Quadrupole Mass Spectrometer (LC-QQQ-MS) System for the National Laboratory for Environmental Testing of Environment (NLET)

1. Background

The National Laboratory for Environmental Testing (NLET) is an accredited laboratory (ISO 17025) of Environment and Climate Change Canada (ECCC), Water Science and Technology Division, Science and Technology Branch, Environment Service technology Laboratories, 867 Lakeshore Rd, Burlington Ontario.

The trace organic laboratory section, of NLET, requires the purchase of a Liquid Chromatography Triple Quadrupole Mass Spectrometer (LC-QQQ-MS) system for the quantitative and qualitative analysis of a wide variety of trace-level environmental organic compounds. It will be used for targeted analysis of contaminants in a variety of matrices in support of Science and Technology (S&T) Science programs.

The Contractor is responsible for ensuring that the Work fully complies with the requirements of the Contract and, in particular, the Contractor is responsible for ensuring that the Work fully furnish and correspond to the requirements in Annex A, Statement of Work.

2. General Requirement Summary

(1) To obtain a fully automated, NEW Liquid Chromatography Triple Quad Mass Spectrometer (LC- QQQ-MS) System; used models, refurbished or prototypes will not be considered. Demo models may be considered on a case by case basis.

(2) If prior to delivery of goods, any component of the purchased LC-QQQ-MS system is upgraded or there is a new equipment release which would render the system obsolete or inferior in performance/sensitivity, the Contractor will provide the Department with the upgrade or new equipment with no additional cost to the Department.

(3) The System must be installed on-site and the Contractor must supply an uninterrupted power supply UPS system and all transformers required to connect the LC-QQQ-MS systems to the Department's power grid.

(4) The Contractor must provide on-site training to staff:

4.1 Following the installation, the Contractor must provide on-site basic training on the use of the instrument and software/controller that runs the system. This training must include but is not limited to, an overview of hardware components, software/controller functions and a session on hardware and preventative maintenance. The training must take place within 2 weeks of installation.

4.2 A second more intensive training session must be provided with an applications chemist within 12 months of the anniversary of instrument installation. The intensive training must consist of a minimum of three days for up to 3 operators on-site training.

4.3 The system must include; an auto-sampler, a liquid chromatograph, a tandem triple quadrupole mass spectrometer (with ESI and APCI sources - either dual or 2 separate sources), and a computer (with keyboard, monitor, colour laser printer, and mouse) equipped with software capable of controlling all components of the LC-MS/MS systems

4.4 The Contractor must include a minimum of a 1 year on-site warranty including parts and labour, travel, yearly preventative maintenance from the date of installation completion plus any travel and living expenses from date of final acceptance sign-off.

4.5 The Contractor must provide 72 h on-site response time during the warranty period.

4.6 The System must come equipped with all the necessary hardware and qualitative and quantitative analysis software that allows detection, interpretation and determination of trace organic chemicals in the environmental samples

4.7 The initial system must be delivered and installed by 31 March 2019

3. Mandatory Requirements

Liquid Chromatography Triple Quadrupole Mass Spectrometer (LC-QQQ-MS)

The Liquid Chromatography Triple Quadrupole Mass Spectrometer (LC-QQQ-MS) system must consist of, but not be limited to, the following major components, complete with all software/hardware and interfacing necessary to make a fully integrated system.

Section 1- Liquid Chromatography (LC)

- 1.1 The LC subsystem must be an integrated part of the total system and designated for unattended operation. It must be under complete control of the operating/data computer system.
- 1.2 The LC subsystem must include an ultra-high performance binary LC pump, an auto-degasser (integrated or standalone), a thermostatic auto-sampler and thermostatic column compartment.
- 1.3 All mobile phase back pressures, flow rates, leak detection and flows to inlets and detectors must be electronically controlled via the computer system.
- 1.4 All tubing, fitting, and regulators required for system installation must be included and be capable of performing between pH range 1-12
- 1.5 The LC method must be a fully integrated method along with Automatic Sampling parameters, Mass Spectrometer settings.

- 1.6 The LC system must be able to run sub 2 μ m particle size columns at a flow rate of up to 1.0 mL/min maintaining stable pressure of 1000 bars.
- 1.7 Degasser: automatic and continuous on-line vacuum degassing with internal volume of 2 mL or less per channel.
- 1.8 The LC system must include a temperature-controllable column compartment which can accommodate UHPLC columns and up to 150 mm HPLC columns while maintaining temperatures in range of 5°C above ambient to 40 °C or higher in no more than 1°C increments. Must have the option to upgrade the column compartment to hold multiple columns with a switching valve under software control.
- 1.9 The LC system must include a temperature-controllable auto-sampler that is compatible with the UHPLC pump, capable of holding at least 96 vials and capable of temperatures ranging from 5 - 40°C, with a needle wash system, in which needle wash volume and/or needle wash time can be programmed via software. The auto-sampler must allow for injection volumes of 1 to 100 μ L in 1 μ L increments (with a precision of 0.5% RSD) with no hardware changes.
- 1.10 LC parts: any other items, including hardware and software not explicitly stated, required for the system to be qualified as per protocols stipulated by the Contractor must be included; and accompanying documentation thereof.

Section 2-Triple Quadrupole Mass Spectrometer (QQQ-MS)

- 2.1 The QQQ-MS Subsystem must be an integrated part of the total system and designated for unattended operation and dedicated to perform LC-QQQ-MS. The QQQ-MS Subsystem must include a triple quadrupole mass spectrometer with ESI and APCI source (either separate or dual source), all relevant operating/Data System Software, operating/Data System Hardware, system implementation and training, service & support and system performance specifications.
- 2.2 The mass stability must be ≤ 0.1 Da over a 24 hour period
- 2.3 Mass resolution of 0.5 Da at full width at half maximum (FWHM) Note: Contractor must provide definition and condition of achieving the Specified resolution
- 2.4 The instrument must have a minimum scan speed of at least 10000 amu/sec
Note: Contractor must provide condition of achieving the specified scan speed.
- 2.5 MS operating modes must include: Neutral Loss, Full scan, Selected Ion Monitoring/Recording (SIM or SIR), Precursor (Parent) ion scan, Product (Daughter) ion scan, and Multiple Reaction Monitoring (MRM)
- 2.6 MS Range: must encompass m/z 10-1500.
- 2.7 Vacuum pumps: must provide all vacuum pumps required for instrument operation.
- 2.8 UPS supplied by bidder
- 2.9 In-house libraries: capable of creating MS/MS libraries for identification/confirmation of compounds of interests with the ability to use a compound database library manager to create and edit entries.

- 2.10 The system must have the capability of threshold triggering of a MRM transition to monitor a minimum of 6 other MRM transitions when that threshold is reached.
- 2.11 Positive and negative mode polarities: Capable of switching and stabilization between positive and negative mode rapidly. System must be able to perform positive-negative polarity switching during one data acquisition run with 50ms inter-scan delay or less.
Note: Contractor must provide switching rate for offered instrument
- 2.12 Instrument Tuning: must have software-based automatic tuning of QQQ-MS instrument.
Note: This will be further evaluated in Annex D.
- 2.13 Compound optimization capability: Must have an "auto" as well as "manual" capability for optimization of compounds in both positive and negative ion modes. Manual optimization must have tuning feature whereby individual, compound specific voltages, can be ramped and graphed to determine the optimum values. Must have the capability to optimize ion source parameters, such as temperature and gas flow, independently and automatically, with a tabulated output of the optimum values.
Note: This will be further evaluated in Annex D.
- 2.14 MS software compatibility: The MS software must permit simple, direct data transfer to popular programs such as Microsoft Word, Excel, Power Point, etc. and the capability to generate pdf format files, export images and text files, and save data in standard format(s) readable by other MS software packages etc.
Note: Contractor must provide a detailed list of these features.

Section 3- Operating/Data Computer System Software

- 3.1 Operating system: The PC computer system's operating system must be Microsoft Windows 7 or greater
- 3.2 Instrument control: full control of instrumentation operation including fully automated system start-up and shut down, initial instrument calibration, parameter optimization, routine operations, calibration, data processing, report generation.
- 3.3 Calibration tools: various calibration modes including external and internal calibration with multilevel linear and multilevel non-linear calibration capability.
- 3.4 Data processing: full data processing and reprocessing capabilities including control or editing of chromatogram integration, compound identification, calibration curves, quantitation and reporting parameters without the need to re-inject samples. Must include two software licenses for off-line data analysis.
- 3.5 Sample sequence control: ability to insert or delete samples without stopping and restarting a previously started acquisition sequence.

Section 4- Operating/Data Computer System Hardware

- 4.1 The PC must at least be an i7 4 type processor operating at 3.2 GHz or Better. Must be able to simultaneous data acquisition and backup (RAID array)

- 4.2 The desktop must have a graphic board with 2 GB RAM or better.
- 4.3 16 GB (or greater) RAM.
- 4.4 2 Tb (or greater) hard drive.
- 4.5 16x (or greater) DVD-/+r RW, Drive
- 4.6 If the instrument requires a dedicated network card for communications then an additional 10/100/1000 Base-T LAN interface must be provided for access to the laboratory's network.
- 4.7 The PC must be equipped with a minimum 24" LCD color monitor that features a minimum resolution of 1280 x 1024.
- 4.8 The data acquisition/data processing software and systems used to control the LC-QQQ- MS instruments must be based on Windows 7 & Windows 10; and compatible with the current version of the McAfee Antivirus system;
- 4.9 Should new software become available during the warranty period, Environment Canada has the option to upgrade free of charge.

Section 5 - Overall System Requirements

- 5.1 The entire system must meet the Canadian Standard Association electrical requirements (for laboratory use)
- 5.2 The Contractor must install all components including auto-sampler, liquid chromatograph, mass spectrometer, computers, and printer and demonstrate instrumentation performance and the ability of the system to meet Canada's performance specification and the manufacturer's performance specifications within the Client's laboratory spaces. Each instrument is subject to meeting the performance requirements detailed in Annex A within three months of installation.
- 5.3 System must be supplied with a minimum of a one (1) year service warranty including parts, labor and travel, including one (1) preventive maintenance visit by the anniversary of installation, on all components. Both on-site and telephone support must be included as standard.

Warranty will begin on the day that the Work is accepted by Canada in accordance with the terms of the Contract.

The Contractor accepts prime responsibility for the diagnosis and resolution of all hardware and software problems that occur in the deliverables throughout the Warranty Period. A repair will not be complete until the instrument meets or exceeds the original installation acceptance criteria.

The cost of providing all labour and materials required for the repair and maintenance of the Work is included in the warranty. No additional charges for time, material or other related costs must be made during the Warranty Period.

Solicitation No. - N° de l'invitation
KW405-190288/A
Client Ref. No. - N° de réf. du client
KW405-190288

Amd. No. - N° de la modif.
File No. - N° du dossier
KIN-8-50049

Buyer ID - Id de l'acheteur
kin655
CCC No./N° CCC - FMS No./N° VME

- 5.4 Telephone or email support service requests must be acknowledged within one business day.
- 6.5 Entire analytical system consisting of liquid chromatography, triple quadrupole mass spectrometer, auto-sampler, and software must be supplied, serviced and warranted by the Contractor.

ANNEX "B"

BASIS OF PAYMENT

For the work described in Annex A "Statement of Work", the Contractor must provide a firm price to include, but not limited to, all costs associated with the delivery, installation, commissioning, training, warranty, service and support.

All prices must be in Canadian currency and must include all travel and delivery charges including freight, risks of transport, shipping insurance, customs duties, and excise taxes, if applicable. HST is extra.

Pricing Basis "A"		
Item	Initial deliverable Description	Lot Price
1	<p>For the work described in Annex A "Statement of Work" To include, but not limited to:</p> <p>System must be supplied with a minimum of a one (1) year service warranty including parts, labor and travel, including one (1) preventive maintenance visit by the anniversary of installation, on all components. Both on-site and telephone support must be included as standard, as per the SOW.</p> <p>The system must be supplied with at least 1 set of consumable parts and tool kit necessary for maintaining operation.</p> <p>Model Number: _____</p> <p>Make: _____</p> <p>List all additional equipment and features that are not included on the base model but are included to meet the Requirement.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	\$ _____
2	Optional Machine (as per Item 1)	\$ _____

Pricing Basis "B"

The bidder should provide a separate options price list in Canadian dollars, for any additional instrument options and consumable parts that may be available for their proposed instrument. These options may include but are not limited to those listed below. This will also include cost for any additional software required for these options (if applicable), and upgrade (where necessary).

All prices must be in Canadian currency and must include all travel and delivery charges including freight, risks of transport, shipping insurance, customs duties, and excise taxes, if applicable. HST is extra.

These prices will not be included in the bid evaluation.

Optional Requirements		Pricing Basis "B"
Item	Optional Requirements	Unit Price
1	The cost and logistics of adding Large Volume Injection: 10 to 1000 µL in 10 µL increments.	
2	The cost and logistics to - add an online Solid Phase Extraction (SPE) module.	
3	The cost and logistics of upgrading the thermostated column compartment to hold more analytical columns under control of a switching valve.	
4	The cost and logistics of any other possible add-on improvements to the system being offered, if applicable.	
5	The cost of an extended warranty for their system including the details of this extended warranty contract.	
6	The cost of a Pesticides MRM database and MS/MS spectral library based on threshold triggered MRM for pesticides. A triggered MRM database library should include compound name, 5 MRM transitions per compound and the instrumental condition for obtaining the MRM transition.	
7	The cost of an extended warranty for their system including the details of this extended warranty contract.	

ANNEX "C"

Mandatory Technical Evaluation Criteria

The bidder must provide brochures, specifications or a written explanation of how the proposed equipment meets each and every one of the following Mandatory Technical Evaluation Requirements described below.

The bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation, or stating complies is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Number	Mandatory Technical Evaluation Requirement	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
Section 1	Liquid Chromatography (LC)	
MT 1.1	The LC subsystem must be an integrated part of the total system and designated for unattended operation. It must be under complete control of the operating/data computer system.	
MT 1.2	The LC subsystem must include an ultra-high performance binary LC pump, an auto-degasser (integrated or standalone), a thermostatic auto-sampler and thermostatic column compartment.	
MT 1.3	All mobile phase back pressures, flow rates, leak detection and flows to inlets and detectors must be electronically controlled via the computer system.	
MT 1.4	All tubing, fitting, and regulators required for system installation must be included and be capable of performing between pH range 1-12	

Number	Mandatory Technical Evaluation Requirement	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
Section 1	Liquid Chromatography (LC)	
MT 1.5	The LC system must be able to run sub 2µm particle size columns at a flow rate of up to 1.0 mL/min maintaining stable pressure of 1000 bars.	
MT 1.6	Degasser: must have automatic and continuous on-line vacuum degassing with internal volume of 2 mL or less per channel.	
MT 1.7	The LC system must include a temperature-controllable column compartment which can accommodate UHPLC columns and up to 150 mm HPLC columns while maintaining temperatures in range of 5°C above ambient to 40 °C or higher in no more than 1°C increments. Must have the option to upgrade the column compartment to hold multiple columns with a switching valve under software control.	
MT 1.8	The LC system must include a temperature-controllable auto-sampler that is compatible with the UHPLC pump, capable of holding at least 96 vials and capable of temperatures ranging from 5 - 40°C, with a needle wash system, in which needle wash volume and/or needle wash time can be programmed via software. The auto-sampler must allow for injection volumes of 1 to 100 µL in 1 µL increments (with a precision of 0.5% RSD) with no hardware changes.	
MT 1.9	LC parts: any other items, including hardware and software not explicitly stated, required for the system to be qualified as per protocols stipulated by the Bidder must be included; and accompanying documentation thereof.	

Number	Mandatory Technical Evaluation Requirement	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
Section 2	Triple Quadrupole Mass Spectrometer (QQQ-MS)	
MT 2.1	The QQQ-MS Subsystem must be an integrated part of the total system and designated for unattended operation and dedicated to perform LC-QQQ-MS. The QQQ-MS Subsystem must include a triple quadrupole mass spectrometer, all relevant operating/Data System Software, operating/Data System Hardware.	
MT 2.2	The mass stability must be ≤ 0.1 Da over a 24 hour period	
MT 2.3	Mass resolution of 0.5 Da at full width at half maximum (FWHM) <i>Note: Bidder must provide definition and condition of achieving the Specified resolution</i>	
MT 2.4	The instrument must have a minimum scan speed of at least 10000 amu/sec <i>Note: Bidder must provide condition of achieving the specified scan speed.</i>	
MT 2.5	MS operating modes must include: Neutral Loss, Full scan, Selected Ion Monitoring/Recording (SIM or SIR), Precursor (Parent) ion scan, Product (Daughter) ion scan, and Multiple Reaction Monitoring (MRM)	
MT 2.6	MS Range: must encompass m/z 10-1500.	
MT 2.7	Vacuum pumps: must provide all vacuum pumps required for instrument operation.	
MT 2.8	In-house libraries: capable of creating MS/MS libraries for identification/confirmation of compounds of interests with the ability to use a compound database library manager to create and edit entries.	
MT 2.9	The system must have the capability of threshold triggering of a MRM transition to monitor a minimum of 6 other MRM transitions when that threshold is reached.	
MT 2.10	Positive and negative mode polarities: Capable of switching and stabilization between positive and negative mode rapidly. System must be able to perform positive-negative polarity switching during one data acquisition run with 50ms inter-scan delay or less. <i>Note: Bidder must provide switching rate for offered instrument</i>	

Number	Mandatory Technical Evaluation Requirement	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
Section 2	Triple Quadrupole Mass Spectrometer (QQQ-MS)	
MT 2.11	Instrument Tuning: must have software-based automatic tuning of QQQ-MS instrument. <i>Note: This will be further evaluated in Annex D.</i>	
MT 2.12	Compound optimization capability: Must have an "auto" as well as "manual" capability for optimization of compounds in both positive and negative ion modes. Manual optimization must have tuning feature whereby individual, compound specific voltages, can be ramped and graphed to determine the optimum values. Must have the capability to optimize ion source parameters, such as temperature and gas flow, independently and automatically, with a tabulated output of the optimum values. <i>Note: This will be further evaluated in Annex D.</i>	
MT 2.13	MS software compatibility: The MS software must permit simple, direct data transfer to popular programs such as Microsoft Word, Excel, Power Point, etc. and the capability to generate pdf format files, export images and text files, and save data in standard format(s) readable by other MS software packages etc. <i>Note: Bidder must provide a detailed list of these features.</i>	
SECTION 3	Operating/Data Computer System Software	
MT 3.1	Operating system: The PC computer system's operating system must be Microsoft Windows 7 or greater	
MT 3.2	Instrument control: full control of instrumentation operation including fully automated system start-up and shut down, initial instrument calibration, parameter optimization, routine operations, calibration, data processing, report generation.	
MT 3.3	Calibration tools: various calibration modes including external and internal calibration with multilevel linear and multilevel non-linear calibration capability.	
MT 3.4	Data processing: full data processing and reprocessing capabilities including control or editing of chromatogram integration, compound identification, calibration curves, quantitation and reporting parameters without the need to re-inject samples. Must also make available two software licenses for off-line data analysis. <i>Note: This will be further evaluated in Annex C.</i>	

Number	Mandatory Technical Evaluation Requirement	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
SECTION 3	Operating/Data Computer System Software	
MT 3.5	Sample sequence control: ability to insert or delete samples without stopping and restarting a previously started acquisition sequence.	
SECTION 4	Operating/Data Computer System Hardware	
MT 4.1	The PC must at least be an i7 4 type processor operating at 3.2 GHz or better. Must be able to simultaneous data acquisition and backup (RAID array)	
MT 4.2	The desktop must have a graphic board with 2 GB RAM or better.	
MT 4.3	16 GB (or greater) RAM.	
MT 4.4	2 Tb (or greater) hard drive.	
MT 4.5	16x (or greater) DVD-/+r RW, Drive	
MT 4.6	If the instrument requires a dedicated network card for communications then an additional 10/100/1000 Base-T LAN interface must be provided for access to the laboratory's network.	
MT 4.7	The PC must be equipped with a minimum 24" LCD color monitor that features a minimum resolution of 1280x1024	
MT 4.8	The data acquisition/data processing software and systems used to control the LC-QQQ- MS instruments must be based on Windows 7 & Windows 10; and compatible with the current version of the McAfee Antivirus system;	
MT 4.9	Should new software become available during the warranty period, Environment Canada has the option to upgrade free of charge.	

Number	Mandatory Technical Evaluation Requirement	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
SECTION 5	Overall System Requirements	
MT 5.1	The entire system must meet the Canadian Standard Association electrical requirements (for laboratory use). Bidder to describe how they meet this requirement.	
MT 5.2	<p>Contractor must provide for 1-year parts and on-site labour warranty on the Work. Warranty will begin on the day that the Work is accepted by Canada in accordance with the terms of the Contract..</p> <p>The Contractor accepts prime responsibility for the diagnosis and resolution of all hardware and software problems that occur in the deliverables throughout the Warranty Period. A repair will not be complete until the Instrument meets or exceeds the original installation acceptance criteria.</p> <p>The cost of providing all labour and materials required for the repair and maintenance of the Work is included in the warranty. No additional charges for time, material or other related costs must be made during the Warranty Period.</p> <p>Bidder to describe how they will meet this requirement.</p>	
MT 5.3	<p>6.2g Telephone or email support service requests must be acknowledged within one business day.</p> <p>Bidder to describe how they will meet this requirement.</p>	
MT 5.4	<p>6.2h Entire analytical system consisting of liquid chromatography, triple quadrupole mass spectrometer, auto-sampler, and software must be supplied, serviced and warranted by one bidder.</p> <p>Bidder to describe how they will meet this requirement.</p>	

Number	Mandatory Technical Evaluation Requirement	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
SECTION 6	Experience	
MT 6.1	<p>The Bidder must have shipped, installed, and serviced a minimum of 5 of the same or similar systems <u>within the last 5 years</u> as of the date of bid closing. For the purpose of this evaluation, "similar systems" means comparability in terms of scope, magnitude, operating environment and business sector.</p> <p>The Bidder should provide the customer company name, location, contact person, current telephone number and current email address of the contact person where the systems have been installed.</p> <p>If any of this information is not provided with the bid at time of bid closing, it must be provided within 2 days of request from the Contracting Authority.</p> <p>Canada will verify the information in writing by e-mail. Canada will send all e-mail to all contact persons supplied by Bidders within a 48-hour period the e-mail address provided in the bid. Bidders will be found non-compliant if a response is not received within 5 working days of the date that Canada's email was sent.</p> <p>On the third working day after sending out the verification request, if Canada has not received a response, Canada will notify the Bidder by e-mail to allow the Bidder to contact the contact person directly to ensure that it responds to Canada within 5 working days. If the individual named by a Bidder is unavailable when required during the evaluation period, the Bidder may provide the name and e-mail address of an alternate contact person from the same customer. Bidders will only be provided with this opportunity once for each company, and only if the originally named individual is unavailable to respond (i.e., the Bidder will not be provided with an opportunity to submit the name of an alternate contact person if the original contact person indicates that he or she is unwilling or unable to respond). The Bidder will have 24 hours to submit the name of a new contact. That contact will again be given 5 working days to respond once Canada sends its reference check request.</p> <p>Wherever information provided by the contact person differs from the information supplied by the Bidder, the information supplied by the reference will be the information evaluated. A bidder will not meet the mandatory experience requirement if (1) the contact person states he or she is unable or unwilling to provide the information requested, or (2) the contact person is not a customer of the Bidder itself (for example, the customer cannot be the customer of an affiliate of the Bidder instead of being a customer of the Bidder itself). Nor will a mandatory be met if the customer is itself an affiliate or other entity that does not deal at arm's length with the Bidder.</p>	

Number	Mandatory Technical Evaluation Requirement	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
SECTION 6	Experience	
MT 6.2	The bidder must demonstrate they have a service history (minimum of 5 years) in the field of Liquid Chromatography Triple Quadrupole Mass Spectrometer (LC-QQQ-MS) in North America.	
MT 6.3	Bidder must have a qualified service engineer with at least one year of service experience with the proposed system within a 200 km range of Burlington, ON.	
SECTION 7	Test Samples	
MT 7.1	<p>The bidder must perform and submit test results with their bid at bid closing to be evaluated against the point rated requirements at Annex D.</p> <p>Samples and standards must be requested from the Contracting Authority, Patrick Semple at the following email address patrick.semple@tpsgc.pwgsc.ca, to perform these tests. Samples and standards will be in methanol/water and must be kept refrigerated until analysis.</p> <p>Samples must be requested by January 4th, 2019.</p>	

ANNEX "D"

TECHNICAL POINT RATED CRITERIA

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

Instrument test results will be used to assess performance of the instruments specified in bids for R1, R2, R3 and R4

All tests must be performed and submitted with the bid at bid closing to be evaluated against the point rated requirements. Samples and standards must be requested from Patrick Semple (Patrick.semple@tpsgc-pwgsc.gc.ca) by **January 4, 2019** to perform these tests. Samples and standards will be in methanol/water and must be kept refrigerated until analysis.

Performance Evaluation (Total of 496 points)

The minimum pass mark for the performance specifications in Annex D is 253 out of a possible total of 496. The minimum points required per test are indicated.

Note that wherever "signal to noise ratio" or "signal:noise" is referenced in the subsequent components of this benchmark evaluation, the definition to be used is that provided below.

Briefly, "RMS signal to noise": the signal is the height above the baseline of the maximum chromatographic peak corresponding to the analyte of interest; baseline noise is defined as the root mean square (standard deviation) of the measured baseline both 30 seconds before and 30 seconds after the chromatographic signal of the analyte of interest.

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

Part 1 - Test Summary:

Item Number		Point Rated Criteria		
Pesticides				
		Test	Maximum Points	Minimum Points Required
R1	Test 1	Sensitivity (S/N) of herbicide standard at 0.05 ng/mL will be assessed.	90	45
R2	Test 2	Sensitivity of a mixed pesticide standard at S/N=5 (± 1) will be assessed.	156	78
Amines				
R3	Test 3	Sensitivity (S/N) will be assessed, based on the response of two amine compounds, using the APCI source (" positive mode " mandatory for this analysis), in a standard solution. A high concentration tuning solution will be provided to optimize response.	150	90
R4	Test 4	Sensitivity will be assessed, based on the response of the two amine compounds above, in a sample extract.	100	40
Total Score Possible			496	253

R1) Signal to Noise of Mixed Herbicide Standard at 0.05 ng/mL (90 points)

15 points awarded per compound for highest S/N of Transition 1 (-3 points removed for next highest, etc...)

****note: while both transitions are required, only Transition 1 will be graded**

Signal to Noise Ratio of Transition 1	Points Assigned
highest ratio	15 points
2 nd highest ratio	12 points
3 rd highest ratio	9 points
4 th highest ratio	6 points

Mixed Herbicide Standard (1 ug/mL)

	Compound Name	Mode	Transition 1 (m/z)	Transition 2 (m/z)
1	Bromoxynil	ESI negative	274 - 79	276 - 81
2	Dicamba	ESI negative	219 - 175	219 - 145
3	2,4-D	ESI negative	219 - 161	221 - 163
4	Dinoseb	ESI negative	239 - 193	239 - 163
5	Picloram	ESI positive	241 - 195	241 - 168
6	Clopyralid	ESI positive	192 - 174	192 - 146

Dilution of the provided standard with acetonitrile/methanol/water is required to determine the S/N at the specified concentration level using a 15-µl injection volume.

Using the RMS signal:noise definition above, provide the S/N of EACH compound (and each transition) at the concentration level: 0.05 ng/mL. **In triplicate.**

A suggested LC method is using mobile phase consisting of solvent A: 0.1% formic acid with 10mM ammonium formate in water and solvent B: 0.1% formic acid with 10mM ammonium formate in 95%methanol using the gradient elution provided below in Table 1 and a Kinetex Biphenyl column (3.0 mm x 100 mm x 2.6µm, Phenomenex®).

The bidder may use an alternative LC method provided the injection volume remains 15 µl and provides full disclosure of the LC method (solvent composition, gradient, column type). Conduct the experiment using positive-negative polarity switching **with a minimum of 8 but ideally 12 points across each peak.**

The Bidder must provide the 3 sets of integrated chromatograms with y-axis in counts, x-axis in retention time (min), and specific MRM transition. Chromatograms are to be provided without any extra processing (i.e. no smoothing or noise reduction).

Table 1. Gradient for mixed herbicide standard analysis - Column temp= 40°C

Total Time (min)	Flow Rate	%A
0.00	250	95.0
0.50	250	95.0
8.00	250	10.0
15.0	250	10.0

R2) Ultimate sensitivity (concentration at S/N = 5 +/- 1) of a mixed pesticide standard (156 points)

13 points awarded per compound for lowest concentration of quantifying transition (-3 points removed for next lowest, etc...)

**note: while both transitions are required, only the quantifying transition chosen (must be noted) will be graded

Sensitivity/Concentration	Points Assigned
best sensitivity (lowest concentration)	13 points
Next best sensitivity (2 nd lowest concentration)	10 points
3 rd best	7 points
4 th best	4 points

Mixed Pesticide Standard (1 ug/mL)

	Compound Name
1	Disulfoton
2	Phorate
3	Terbufos
4	Azinphosmethyl
5	Dinotefuran
6	Spiromesifen
7	Aldicarb
8	Carbaryl
9	Oxamyl
10	Fomesafen
11	Acifluorfen
12	Metconazole

Dilution of the provided standard with acetonitrile/water/methanol (**no concentration or evaporation**) is required to achieve the required S/N using a 15 µl injection volume.

Using ESI, the bidder must choose and optimize 2 transitions per compound and, using the RMS signal:noise definition above, provide the concentration and S/N of the quantifying and qualifying transitions for EACH compound. **In triplicate.**

A suggested LC method is using mobile phase consisting of solvent A: 0.1% formic acid with 10mM ammonium acetate in water and solvent B: 0.1% formic acid with 10mM ammonium acetate in methanol using the gradient elution provided below in Table 2 and a Synergi Fusion column (3.0 mm x 50 mm x 4µm, Phenomenex®).

The bidder may use an alternative LC method provided the injection volume remains 15 µl and provides full disclosure of the LC method (solvent composition, gradient, column type). Conduct the experiment using positive-negative polarity switching **with a minimum of 8 but ideally 12 points across each peak.**

The Bidder must provide the 3 sets of integrated chromatograms with y-axis in counts, x-axis in retention time (min), S/N and concentration shown. Chromatograms are to be provided without any extra processing (i.e. no smoothing or noise reduction).

Table 2. Gradient for mixed pesticide standard analysis - Column temp= 40°C

Total Time (min)	Flow Rate	%A
0.00	450	95.0
0.50	450	95.0
12.00	450	5.0
14.0	450	5.0

R3) Sensitivity (S/N) will be assessed, based on the response of two amine compounds, using the APCI source ("positive mode" mandatory for this analysis), in a standard solution. A high concentration tuning solution will be provided to optimize response. (150 points)

Signal to Noise Ratio of Transition 1	Points Assigned
highest ratio	75 points
2 nd highest ratio	65 points
3 rd highest ratio	55 points
4 th highest ratio	45 points

Chlorhexidine: 505-336 m/z

Disperse yellow 3: 270-107 m/z

The mobile phase should consist of 0.1 % formic acid in LCMS grade water and methanol. A suggested LC gradient is show below, but is not mandatory. A suggested column is the Phenomenex Synergi Max RP 100 x 3 mm; 2.5 µm particle size; other columns may be used, if improvements in chromatography can be demonstrated.

The bidder must provide **5 integrated chromatograms** for the standard, without any software based noise reduction or peak smoothing, using the RMS signal:noise definition above. Each chromatographic peak should have a minimum of 8 but ideally 12 points per peak. The bidder must optimize the signal to noise ratio for the analytes in the standard, without any preconcentration or alteration of the sample itself. The bidders must use an injection volume of 20 µL.

Table 2: suggested gradient program for amine analysis.

Column temp= 40°C

Run Time (min)	Flow Rate µL/min	%A
0.00	400	70
0.5	400	70
2.5	400	0
8.0	400	0
8.1	400	70
12	400	70

R4) Sensitivity (S/N) will be assessed, based on the response of the two amine compounds above, in a sample extract. (100 points)

Signal to Noise Ratio of Transition 1	Points Assigned
highest ratio	50 points
2 nd highest ratio	40 points
3 rd highest ratio	30 points
4 th highest ratio	20 points

The bidder may use the chromatographic conditions, provided, but they are not required. The bidder must provide 5 integrated chromatograms for each analyte, with y-axis in count , x-axis in retention time (min), without any software based noise reduction or peak smoothing. The bidder must optimize the signal to noise ratio for the analytes in the standard, to the extent possible, without any preconcentration or alteration of the sample, itself. The bidders must use an injection volume of 20 µL.

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KIN-8-50049

Buyer ID - Id de l'acheteur
kin655
CCC No./N° CCC - FMS No./N° VME

Technical Evaluation (Total of 360 points)

If a bidder meets the mandatory specifications and meets the minimum points required for R1, R2, R3 & R4, Rated Criteria R5 – R7 will be assessed.

During a Webex virtual conference between EC personnel and the bidder, or during a site visit by EC personnel, (method at Canada's discretion) the software used to control all components of the proposed systems (including autosampler, LC, and all sources) will be evaluated as follows:

Canada will propose up to three dates for the evaluation.

Item Number	Point Rated Criteria		Proposal Reference page number
R5	Operation & Method Development		Scoring Methodology
	i.	Instrument Tuning (30 total) <ul style="list-style-type: none"> • real time display (Y or N) • with choice of automated or manual (must have both to score points as below) <p style="text-align: center;">automated (# of steps to perform)</p> <p style="text-align: center;">Manual (# of steps to perform)</p>	10 10 (≤ 5 steps) 5 (>5) 10 (≤ 5 steps) 5 (>5)
	ii.	Optimization for MRM development (60 total): <ul style="list-style-type: none"> • choice of automated or manual (Y or N) • number of manually optimizable parameters • graphical or tabulated output of manually optimizable parameters (# of parameters) 	10 20 (≥ 5) 10 (<5) 30 (≥ 5) 15 (2-5) 5 (<2)
	iii.	HPLC method creation (20 total) <ul style="list-style-type: none"> • availability of gradient profiles (Y or N) • flow-rate ramping (Y or N) • column switching features (Y or N) 	5 5 10
Total Score Possible			110
Minimum Points required			55

Item Number	Point Rated Criteria	Proposal Reference page number
R6	Data Processing	Points
i	Ability of software to (40 total): <ul style="list-style-type: none"> • calculate signal-to-noise (Y or N) • options for flagging errors (Y or N) • ion ratio calculations (Y or N) 	10 10 20
iii	Calibration table setup (40 total) <ul style="list-style-type: none"> • options for internal/external calibration and TOTAL calculations (Y or N) • ability to change Internal Standards without reprocessing (Y or N) • unique concentration table per analyte (Y or N) 	10 15 15
iv	Creation of a library, library search options and library availability	10 (Yes no)
v	Dependant data acquisition (i.e. trigger a scan if an MRM is detected)	10 (Yes no)
Total Points Possible		100
Minimum Points Required		50

Item Number	Point Rated Criteria		Proposal Reference page number
R7	Additional Capacities or Features The proposed system(s) include(s) the following	Points	
	i. Ion mobility cell	50 (Yes no)	
	iii. Linear Ion Trap	50 (Yes no)	
	iv. Ionization source orientation in which the nebulized spray is orthogonal to the sampling aperture for source longevity and analyzer protection.	50 (Yes no)	
Total Points Possible		150	
Minimum Points required		NA	

Annex D: Summary of Point Rated Criteria (856 points)

	Rated Criteria	Max Score	Minimum Points Required
R1	Herbicides Test 1	90	45
R2	Pesticides Test 1	156	78
R3	Amines Test 1	150	90
R4	Amines Test 2	100	40
	Total Maximum Score	496	253

	Rated Criteria	Max Score	Minimum Points Required
R5	Method Development	110	55
R6	Data Processing	100	50
R7	Additional Capacities or Features	150	N/A
	Total Maximum Score	360	135

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ANNEX “E” to PART 3 OF THE BID SOLICITATION

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts any of the following Electronic Payment Instrument(s):

- Direct Deposit (Domestic and International);
- Wire Transfer (International Only);