



**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
Réception des soumissions - TPSGC / Bid  
Receiving - PWGSC  
1550, Avenue d'Estimauville  
1550, D'Estimauville Avenue  
Québec  
Québec  
G1J 0C7

**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**

<b>Title - Sujet</b> Spectrometer	
<b>Solicitation No. - N° de l'invitation</b> W7701-166145/A	<b>Date</b> 2016-01-12
<b>Client Reference No. - N° de référence du client</b> W7701-166145	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$QCN-016-16664	
<b>File No. - N° de dossier</b> QCN-5-38262 (016)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2016-02-22</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Heure Normale du l'Est HNE
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Carrier, Bertrand	<b>Buyer Id - Id de l'acheteur</b> qcn016
<b>Telephone No. - N° de téléphone</b> (418) 649-2774 ( )	<b>FAX No. - N° de FAX</b> (418) 648-2209
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> RDDC-R ET D DEFENSE CANADA-VALCARTIER DRDC-DEFENCE R & D CANADA-VALCARTIE 2459 ROUTE DE LA BRAVOURE BÂTIMENT 53 QUEBEC Québec G3J 1X5 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**

TPSGC/PWGSC  
601-1550, Avenue d'Estimauville  
Québec  
Québec  
G1J 0C7

<b>Delivery Required - Livraison exigée</b> VOIR DOC	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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Solicitation No. - N° de l'invitation  
W7701-166145/A  
Client Ref. No. - N° de réf. du client  
W7701-166145

Amd. No. - N° de la modif.  
File No. - N° du dossier  
QCN-5-38262

Buyer ID - Id de l'acheteur  
qcn016  
CCC No./N° CCC - FMS No./N° VME  
QCN-5-38262

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Requirement**

The requirement is detailed at article 6.2 of the Resulting Contract Clauses section.

### **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) (<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: 90 days

#### 2.1.1 SACC Manual Clauses

The following terms and conditions are incorporated herein

SACC Reference	Section	Date
B1000T	Condition of Material - Bid	2014-06-26
C9000T	Price	2010-08-16

### 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.

Your proposal can be transmitted by fax to # 418-648-2209 or by mail to the following address:

Bid Receiving Unit  
Public Works and Government Services Canada (PWGSC)  
1550 D'Estimauville Avenue  
Quebec City, Quebec, Canada, G1J 0C7

### 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.

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Buyer ID - Id de l'acheteur  
qcn016  
CCC No./N° CCC - FMS No./N° VME  
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## **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 Quebec.

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) (<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 detailed in Annex A.

- (a) Bidders must use Annex C - Compliance Matrix, provided in the RFP and record responses in cells applicable for each item listed.
- (b) Bidders must submit their answers in the "Compliance" column for each criterion.

The mandatory technical criteria are described in Annex C.

#### **Section II: Financial Bid**

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

##### **3.1.1 Exchange Rate Fluctuation**

SACC Manual Clauses: 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**

The bid must meet the mandatory technical criteria specified at Annex C. Bidders must provide the necessary documentation to support compliance with this requirement.

Bids which fail to meet the mandatory technical criteria will be declared non-responsive. Each mandatory technical criterion should be addressed separately.

The mandatory technical criteria are described in Annex C.

#### **4.1.2 Financial Evaluation**

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

Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.

### **4.2 Basis of Selection**

A bid must comply with the requirements of the bid solicitation and all the mandatory technical criteria to be declared responsive. The responsive bid with the lowest Total Bid Price (TBP) (Annex B) will be recommended for award of a contract.

## **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

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

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

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

### **5.1 Certifications Required with the Bid**

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

#### **5.1.1 Declaration of Convicted Offences**

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

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

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

#### **5.2.1 Integrity Provisions – List of Names**

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

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

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

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

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

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list at the time of contract award.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex [Federal Contractors Program for Employment Equity - Certification](#), before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

### 5.2.3 Bidder Certifies that All Equipment is “Off-the-Shelf”

Any equipment bid to meet this requirement must be “off-the-shelf” (unless otherwise stated in this bid solicitation), meaning that each item of equipment is commercially available and requires no further research or development and is part of an existing product line with a field-proven operational history (that is, it has not simply been tested in a laboratory or experimental environment). If any of the equipment bid is a fully compatible extension of a field-proven product line, it must have been publicly announced on or before the bid closing date. By submitting a bid, the Bidder is certifying that the entire equipment bid is off-the-shelf.

### 5.2.4 OEM Certification

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

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

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

## **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**

The Contractor must supply and deliver one (1) fiber spectrometers system for the analysis of emission signals, in accordance with the Requirement 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 \(2015-09-03\), General Conditions - Goods \(Medium Complexity\), apply to and form part of the Contract.](#)

#### **6.3.2 Supplemental General Conditions**

[4001 \(2015-04-01\), Hardware purchase, lease and maintenance, apply to and form part of the Contract.](#)

### **6.4 Term of Contract**

#### **6.4.1 Period of the Contract**

The contract period is from the date of contract award until the end of the warranty period inclusively.

#### **6.4.2 Delivery Date**

The contractor must have completed the delivery on or before March 31, 2016.

### **6.5 Authorities**

#### **6.5.1 Contracting Authority**

The Contracting Authority for the Contract is:

Name: Bertrand Carrier  
Title: Supply Specialist  
Public Works and Government Services Canada  
Acquisitions Branch  
Address: 1550 D'Estimauville Ave.,  
Quebec, Qc.  
G1J 0C7  
Telephone: 418-649-2774  
Facsimile: 418-648-2209  
E-mail address: Bertrand.Carrier@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:

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

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 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.

### 6.6.2 Terms of payment

SACC Manual Clause H1000C, (2012-05-12) 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:  
The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

## 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 Quebec.

### 6.10 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the General Conditions 2010A (2015-09-03) Goods (Medium Complexity);
- (c) the supplemental general conditions 4001 (2015-04-01) Hardware Purchase, Lease and maintenance;
- (d) Annex A, Statement of requirement;
- (e) Annex B, Basis of payment;
- (f) Annex C, Compliance Matrix – Mandatory technical criteria;
- (g) Annex D, OEM Certification Form (OEM);
- (g) the Contractor's bid dated \_\_\_\_\_ (*insert date of bid*)

### 6.11 SACC Manual Clauses

G1005C	2008-05-12	Insurance
A9006C	2012-07-16	Defence Contract
B7500C	2006-06-16	Excess Goods
C2611C	2007-11-30	Customs Duties - Contractor Importer
D9002C	2007-11-30	Incomplete Assemblies
B1501C	2006-06-16	Electric Equipment

### 6.12 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

### 6.13 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered DDP Delivered Duty Paid; Defence Research and Development Canada (DRDC), 2459 de la Bravoure Road, Building 53, Québec (Québec) G3J 1X5 Canada, Incoterms 2000 for shipments from commercial contractor.

**ANNEX A – STATEMENT OF REQUIREMENT  
FIBER SPECTROMETERS FOR THE ANALYSIS OF EMISSION SIGNALS**

**1. BACKGROUND**

The interaction of laser radiation with solid materials can often produce secondary radiation (thermal, fluorescence) that can be analysed for identification or monitoring. Grating-based spectrometers are a good tool to perform an adequate analysis by providing useful information under the form of a spectrally resolved plot of the captured signals. Nowadays, commercially available compact fiber spectrometers using detector arrays provide adequate performance and are user-friendly.

As such, DRDC is interested in acquiring a grating-based fiber spectrometer (or a system comprising more than one spectrometer) equipped with array of detectors for secondary signal analysis produced during laser-matter interactions.

**2. ACRONYMS**

DRDC	Defence Research and Development Canada
SOR	Statement of Requirement
TA	Technical Authority
UV	Ultraviolet
VIS	Visible
NIR	Near infrared
SMA	Sub miniature A
System	Spectrometer or a system comprising an assembly of spectrometers

**3. REQUIREMENTS**

- 3.1 Fiber spectrometers for the analysis of emission signals  
Required quantity: 1

The Contractor must provide the requirement with the following specifications:

Specifications	Value
Spectrometer or a system comprising an assembly of spectrometers	The spectrometer(s) are using gratings to provide spectrally resolved signals. The spectrally resolved signals are collected with an array of detectors such that the full spectrum is acquired without scanning (i.e. single shot data acquisition).
Spectral range	The system must cover the spectral band between 200 nm (nanometer) and 1160 nm
Resolution	The system spectral resolution must be inferior to 0.8 nm over the entire spectral range.
Spectrometer (or system) operation	The system is operated from a single software interface. Data from all the spectrometers from the system can be collected simultaneously.
Data acquisition	The system is able to record time series. (i.e. it is able to acquire and register the temporal evolution of the spectrum as a function of time). The minimum integration time for a single frame acquisition must be inferior or equal to 8 ms (millisecond) and the maximum integration time must be larger or equal to 5 second. The maximum data acquisition frequency must be 100 Hz or higher.
Data	Data can be exported in a data analysis software such as Matlab.
Detector	The number of pixels on the detector of each spectrometer of the system must be at least 2048 (along the spectral axis, i.e. the array can have dimensions 1 x 2048, 2 x 2048 or 10 x 2048 but not 2 x 1024). It must be sensitive over the whole spectrum of its intended use.
Cooling	The detectors must be cooled by a thermos electric cooling system

Specifications	Value
Operation	The software must be able to operate on Windows 7 Enterprise. The system can be programmed/configured/operated from an external application (other than the original spectrometer software). This can be done, for example, via a USB cable.
Signal collection	The signal must be collected by a single optical fiber. If the system is comprised of more than one spectrometer, the optical fiber must be split to deliver the signal to the individual devices.
Optical fiber	The optical fiber cable must at least 2 meters long and have a transmission capacity of more than 70% over the entire spectral range.

### **3.2 Accessories**

The Contractor must provide the following accessories for requirement 3.1:

Description	Required quantity
Collimating lens for UV/VIS/NIR, including SMA adapter. Used to focus light on the fiber tip.	1
System software for operation. The software must be compliant to the requirements listed above.	1
Optical fiber cable to deliver the signal to the spectrometer(s). The optic fiber must be compliant with the requirements listed above.	1
User guide	1

### **4. Deliverables**

The Contractor must provide a complete spectrometer or system that is compliant with all the requirements listed above including the operation software, appropriate optical fiber cable, collimating lens and the user guide.

**ANNEX B – BASIS OF PAYMENT**

Item	Description	Qty	UI	Unit Price	Extended Price
1	<b>SPECTROMETER OR A SYSTEM COMPRISING AN ASSEMBLY OF SPECTROMETERS FOR THE ANALYSIS OF EMISSION SIGNALS</b> (according to the technical details specified in Annex A) Including: <ul style="list-style-type: none"> <li>• Collimating lens for UV/VIS/NIR, including SMA adapter.</li> <li>• Optical fibre cable</li> <li>• Operating Software</li> <li>• Documentation</li> </ul>	1	EACH	\$	\$
2	DDP (Courcelette, Québec, Canada), including customs duties, handling and delivery.	1	LOT	\$	\$
<b>TOTAL BID PRICE (TBD) =</b>					<b>\$</b>
<b>Note : Price are in Canadian Devices (CND), excluding Applicable Sales Taxes.</b>					

**ANNEX C – COMPLIANCE MATRIX  
MANDATORY TECHNICAL REQUIREMENTS**

The bidder must include with its proposal the datasheets of the products offered.

**IMPORTANT:**

The bidder must indicate, for each mandatory criteria, whether the proposed equipment complies or not by checking the relevant box. The bidder must clearly demonstrate how the proposed equipment complies with each criteria.

Where it is necessary to refer to other documentation that is included in the proposal, bidders should include the precise location of the reference material including the title of the document, and the page and paragraph numbers. It is imperative that the bidder provides an answer for each criteria. It is the bidder's responsibility to provide enough details to permit a complete evaluation.

Canada will evaluate only the documentation provided with a bidder's bid. **Canada will not evaluate information such as references to Web site addresses where additional information can be found, or technical manuals or brochures not submitted with the bid.**

#	Mandatory Technical Criteria	Compliance	Reference
MO1	The system is grating-based and capture the full signal with a detector array. (i.e. full spectrum captured with a single shot, no scanning devices).		
MO2	The system is sensitive from 200 nm to 1160 nm		
MO3	The light signal is captured by a single optical fiber.		
MO4	The optical fiber cable must be at least 2 meters long.		
MO5	The system is operated from a single software interface.		
MO6	The software is able to record time series (i.e. temporal evolution of the spectra).		
MO7	The detectors are cooled with a thermo electric cooling system.		
MO8	The system operates on Windows 7 Enterprise.		
MO9	The number of pixels on the detector of each spectrometer of the system must be at least 2048 (along the spectral axis, i.e. the array can have dimensions 1x2048, 2 x 2048 or 10 x 2048 but not 2 x 1024). It must be sensitive over the whole spectrum of its intended use.		
MO10	The system can be programmed/configured/operated from an external application (other than the original spectrometer software). This can be done, for example, via a USB cable.		
MO11	The system's spectral resolution is <=0.8 nm over the entire spectral range.		
MO12	Data can be exported in a data analysis software such as Matlab.		
MO13	The minimum integration time for a single frame acquisition must be inferior or equal to 8 ms (millisecond) and the		

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qcn016  
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#	Mandatory Technical Criteria	Compliance	Reference
	maximum integration time must be larger or equal to 5 second.		
MO14	The maximum data acquisition frequency must be 100 Hz or higher.		
MO15	The optical fiber cable must have a transmission capacity of more than 70% over the entire spectral range.		

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### ANNEX D – OEM Certification Form

#### OEM Certification Form

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

Name of OEM \_\_\_\_\_

Signature of authorized signatory of OEM \_\_\_\_\_

Print Name of authorized signatory of OEM \_\_\_\_\_

Print Title of authorized signatory of OEM \_\_\_\_\_

Address for authorized signatory of OEM \_\_\_\_\_

Telephone no. for authorized signatory of OEM \_\_\_\_\_

Fax no. for authorized signatory of OEM \_\_\_\_\_

Date signed \_\_\_\_\_

Solicitation Number \_\_\_\_\_

Name of Bidder \_\_\_\_\_