

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

Title - Sujet Development in LWIR polarization	
Solicitation No. - N° de l'invitation W7701-156004/A	Date 2015-09-09
Client Reference No. - N° de référence du client W7701-156004	
GETS Reference No. - N° de référence de SEAG PW-\$QCL-038-16533	
File No. - N° de dossier QCL-5-38010 (038)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-09-25	Time Zone Fuseau horaire Heure Avancée de l'Est HAE
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: Fournier, Annie	Buyer Id - Id de l'acheteur qcl038
Telephone No. - N° de téléphone (418) 649-2775 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEFENCE R & D CANADA - VALCARTIER VALCARTIER RESEARCH CENTER 2459 ROUTE DE LA BRAVOURE QUEBEC Québec G3J1X5 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

Delivery Required - Livraison exigée VOIR DOC	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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W7701-156004

Amd. No. - N° de la modif.

File No. - N° du dossier

QCL-5-38010

Buyer ID - Id de l'acheteur

qc1038

CCC No./N° CCC - FMS No/ N° VME

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qcl 038

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PART 1 - GENERAL INFORMATION

1. Introduction

The bid solicitation document is divided into seven parts plus attachments and annexes as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications: includes the certifications to be provided;
- Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work, the Basis of Payment, the Contractor Disclosure of Foreground Information, the Security Requirements Check List, the Request for visit from and any other annexes.

2. Summary

(a) Title

Development in long wave infrared polarization (LWIR): modeling, system evaluation, technical support and trial management.

(b) Description of work

Objective

Defence Research and Development Canada (DRDC) - Valcartier Research Centre is continuing its development of hyperspectral sensors in long wave infrared (LWIR) for target detection. To pursue its objectives, DRDC requires the services of a Contractor to perform the following tasks:

- evaluation of the performance of broadband multi-spectral infrared cameras (Polaris) and four Fourier transform infrared (FTIR) spectrometers for measuring optical constants, and evaluation of infrared polarimetric hyperspectral sensors for surveillance ;
- preparation and coordination of test logistics and project management support;
- modeling and characterization of phenomenology, polarized optical signatures and bidirectional reflectance distribution functions (BRDF) in long wave infrared (LWIR); and
- development, programming and implementation of detection and identification algorithms and user interfaces for polarization detection.

Background/History

The DRDC Valcartier Research Centre has developed unique expertise and methodology in remote detection and identification of chemical gas clouds through the development of a prototype, known as Compact ATmospheric Sounding Interferometer (CATSI) and subsequently, two technical development models for a state-of-the-art interferometer, Engineering Development Model (CATSI EDM) and its algorithm Chemical Agent Spectral Signature Detection and Identification (CASSIDI). This technology uses differential FTIR radiometry optimized for optical subtraction. From 2007 to 2010, this technology was fine tuned to add polarization and imaging in the development of a Multi-option Differential Detection and Imaging Fourier Spectrometer (MoDDIFS) research prototype. MoDDIFS was demonstrated and tested for gas detection, but is used more specifically for studying and validating concepts relating to the detection of surface contaminants through its polarization option. A new innovative instrument, Polarized-improved CATSI (P-iCATSI), was developed and delivered in early 2013. It offers alternative field-of-view and data capture options for the program at the DRDC Valcartier Research Centre.

Since 2011, in parallel with the development of these sensors, the DRDC Valcartier Research Centre has had another contract to enable it to address the phenomenology of polarized optics in LWIR and its modeling, development of methodologies for measuring optical constants, development of algorithms and softwares for detection/identification applications and their implementation in its two polarized sensors, as well as conducting numerous field experiments to test algorithms. New efforts by the DRDC Valcartier Research Centre are focused on continuing its work to fine tune detection methodologies involving polarization in LWIR to detect solid and liquid targets, and IR polarization phenomenology and spectral signatures of those targets will continue to be investigated.

(c) Client

The organization for which the services are to be rendered is Defence Research and Development Canada - Valcartier (DRDC - Valcartier).

(d) The period of contract

The period of Contract is from the date to Contract to March 31st, 2018, inclusive.

(e) Key information

- i. Defence Research and Development Canada - Valcartier has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada.
- ii. Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standard Instructions 2003.
- iii. For services requirements, Bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.
- iv. The requirement is limited to Canadian goods and/or services.
- v. The requirement is subject to the Agreement on Internal Trade (AIT).
- vi. There is a security requirement associated with this requirement. For additional information, consult Part 6 - Security, Financial and Other Requirements, and Part 7 - Resulting Contract Clauses. Bidders should consult the "Security Requirements for PWGSC Bid Solicitations -

Instructions for Bidders" (<http://www.tpsgc-pwgsc.gc.ca/app-acq/lc-pl/lc-pl-eng.html#a31>) document on the Departmental Standard Procurement Documents website.

- vii. For services requirements, Bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.
- viii. This procurement is subject to the Controlled Goods Program.
- ix. The maximum amount of available funding for this Contract is 830,000.00\$, Applicable Taxes extra.

3. Debriefings

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

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

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

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

The 2003 (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: sixty (60) days

Insert: one hundred twenty (120) days

1.1 SACC Manual Clauses

A7035T (2007-05-25), List of Proposed Subcontractors

2. Submission of Bids

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

Bid Receiving - PWGSC
1550, D'Estimauville Avenue
Quebec, Quebec
G1J 0C7

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

3. Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPS, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the Financial Administration Act, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- (i) an individual;
- (ii) an individual who has incorporated;
- (iii) a partnership made of former public servants; or
- (iv) a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the Public Service Superannuation Act (PSSA), R.S., 1985, c.P-36, and any increases paid pursuant to the Supplementary Retirement Benefits Act, R.S., 1985, c.S-24 as it affects the PSSA. It does not include pensions payable pursuant to the Canadian Forces Superannuation Act, R.S., 1985, c.C-17, the Defence Services Pension Continuation Act, 1970, c.D-3, the Royal Canadian Mounted Police Pension Continuation Act, 1970, c.R-10, and the Royal Canadian Mounted Police Superannuation Act, R.S., 1985, c.R-11, the Members of Parliament Retiring Allowances Act, R.S., 1985, c.M-5, and that portion of pension payable to the Canada Pension Plan Act, R.S., 1985, c.C-8.

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension?

Yes ()

No ()

If so, the Bidder must provide the following information, for all FPS in receipt of a pension, as applicable:

- (i) name of former public servant;
- (ii) date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with **Contracting Policy Notice: 2012-2** and the Guidelines on the Proactive Disclosure of Contracts.

Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive?

Yes ()

No ()

If so, the Bidder must provide the following information:

- (i) name of former public servant;
- (ii) conditions of the lump sum payment incentive;
- (iii) date of termination of employment;
- (iv) amount of lump sum payment;

- (v) rate of pay on which lump sum payment is based;
- (vi) period of lump sum payment including start date, end date and number of weeks;
- (vii) number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes

4. Communications - Solicitation Period

All enquiries must be submitted in writing to the Contracting Authority, preferably via email at annie.fournier@tpsgc-pwgsc.gc.ca, **no later than eight (8) 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.

5. Applicable Laws

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

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.

6. Basis for Canada's Ownership of Intellectual Property

Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada on the following grounds:

The Treasury Board, granted Defence Research and Development Canada exemption from the Treasury Board Policy on "Title to Intellectual Property Arising Under Crown Procurement Contracts"

7. Maximum Funding

The maximum funding available for the contract resulting from the bid solicitation is \$830,000.00 (Applicable Taxes extra, as appropriate). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

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

Section I : Technical Bid (5 hard copies and 2 soft copies on CD or DVD)

Section II : Financial Bid (1 hard copy)

Section III : Certifications (1 hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft 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; and
- (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 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, print double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

1.1 Section I : Technical Bid

- (a) In their technical bid, bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should clearly address 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 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.

- (b) The technical bid consists of the following:

-
- (i) All the information required to demonstrate its conformity with the Mandatory and Point Rated Technical Criteria described in Attachment 2 of this document – Mandatory and Point Rated Technical Criteria.

1.2 Section II : Financial Bid

1.2.1 Bidders must submit their financial bid in accordance with the following:

- (a) The information should be provided in accordance with the Financial Bid Presentation Sheet in Attachment 1.
- (b) Prices must be in Canadian funds, Applicable Taxes excluded, and Canadian customs duties and excise taxes included.
- (c) A firm all-inclusive hourly rate for each category of resource proposed for each year of the contract period.

1.3 Section III : Certifications

Bidders must submit the certifications required under Part 5.

1.4 Additional Information

Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standard Instructions 2003.

For services requirements, Bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.

Canada requests that bidders provide the following information:

Administrative representative :

Name : _____

Telephone : _____

Facsimile : _____

Email : _____

Technical representative :

Name : _____

Telephone : _____

Facsimile : _____

Email : _____

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

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

1.1 Technical Evaluation

Except where expressly provided otherwise, the experience described in the bid must be the experience of the Bidder itself (which includes the experience of any companies that formed the Bidder by way of a merger but does not include any experience acquired through a purchase of assets or an assignment of contract). The experience of the Bidder's affiliates (i.e. parent, subsidiary or sister corporations), subcontractors, or suppliers will not be considered.

1.1.1 Mandatory Technical Criteria

Refer to Attachment 2, Mandatory and Point Rated Technical Criteria.

1.1.2 Point Rated Technical Criteria

Refer to Attachment 2, Mandatory and Point Rated Technical Criteria.

1.2 Financial Evaluation

1.2.1 Evaluation of Price

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

2. Basis of Selection

2.1 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;
 - (b) meet all mandatory criteria;
 - (c) obtain the required minimum points specified for each group of criterion; and
 - (d) obtain the required minimum of 75 points overall for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 125 points.
- 2. Bids not meeting (a) or (b) or (c) or (d) will be declared non-responsive.
- 3. The selection will be based on the highest responsive combined rating of technical merit and price, provided that the total evaluated price does not exceed the budget available for this

requirement. The ratio will be 70% for the technical merit and 30% 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 70%.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated average hourly rate and the ratio of 30%.
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 70/30 ratio of technical merit and price, respectively. The total available points equal 125 and the average hourly rate is \$75.00.

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

	Bidder		
	Bidder 1	Bidder 2	Bidder 3
Overall Technical Score	115/125	89/125	92/125
Average hourly rate	\$80.00	\$75.00	\$90.00
	Calculations		
Technical Merit Score	$115/125 \times 70 = 64.4$	$89/125 \times 70 = 49.84$	$92/125 \times 70 = 51.52$
Pricing Score	$75/80 \times 30 = 28.125$	$75/75 \times 30 = 30.00$	$75/90 \times 30 = 24.99$
Combined Rating	92.525	79.84	76.51
Overall Rating	1st	2nd	3rd

7.2 Example of calculation for the average hourly rate:

Bidder #1

Labour categories	Hourly firm Rate	Number of hours
Project Manager	100\$/hour	100 hours
Main resource for task 3.1	80\$/hour	500 hours
Main resource for task 3.2	85\$/hour	550 hours

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Others (secondary resources for task 3.2)	65\$/hour	65 hours
Total of Article 1 – Labour		100,975.00\$

Number of hours proposed: $100 + 500 + 550 + 65 = 1215$ hours

Average hourly rate evaluated: $100,975.00\$ / 1215$ hours = 83.11\$/hour

8. The maximum funding available for the contract resulting from the bid solicitation is \$830,000.00 (Applicable Taxes extra, as appropriate). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

PART 5 - CERTIFICATIONS

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.

1. Certifications Required with the Bid

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

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.

1.2 Additional Certifications Required with the Bid

1.2.1 Canadian Content Certification

This procurement is limited to Canadian services.

The Bidder certifies that:

() the service(s) offered is(are) a Canadian service as defined in paragraph 2 of clause A3050T.

1.2.1.1 SACC Manual clause [A3050T](#) _____ (*insert date*) Canadian Content Definition

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 specified will render the bid non-responsive.

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.

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_equality/eq/emp/fcp/list/inelig.shtml)" list (http://www.labour.gc.ca/eng/standards_equality/eq/emp/fcp/list/inelig.shtml) available from [Employment and Social Development Canada \(ESDC\) - Labour's](#) website.

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

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](#)" 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.

2.3 Status and Availability of Resources

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability. Failure to comply with the request may result in the bid being declared non-responsive.

2.4 Education and Experience

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.

2.5 Language Capability

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Client Ref No. – N° de réf. du client
W7701-15-6004

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-5-38010

Buyer ID – id de l'acheteur
qcl 038

The Bidder certifies that it has the language capability required to perform the Work, as stipulated in the Statement of Work.

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

1. Security Requirement

1. Before award of a contract, the following conditions must be met:
 - (a) the Bidder must hold a valid organization security clearance as indicated in Part 7 - Resulting Contract Clauses;
 - (b) the Bidder's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirement as indicated in Part 7 - Resulting Contract Clauses;
 - (c) the Bidder must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites.
2. Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful bidder to obtain the required clearance will be at the entire discretion of the Contracting Authority.
3. For additional information on security requirements, bidders should consult the "Security Requirements for PWGSC Bid Solicitations - Instructions for Bidders" (<http://www.tpsgc-pwgsc.gc.ca/app-acq/lc-pl/lc-pl-eng.html#a31>) document on the Departmental Standard Procurement Documents website.

2. Financial Capability

SACC Manual clause A9033T (2012-07-16), Financial Capability

3. Controlled Goods Requirement

SACC Manual clause A9130T (2014-11-27), Controlled Goods Program

PART 7 - RESULTING CONTRACT CLAUSES

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

1. Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex A and the Contractor's technical bid entitled _____, dated _____. **(to be completed by Canada at the time of contract award)**

2. Standard Clauses and Conditions

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

2.1 General Conditions

2040 (2015-07-03), General Conditions - Research & Development, apply to and form part of the Contract.

2.2 Supplemental General Conditions

The following supplemental general conditions apply to and form part of the Contract:

4002 (2010-08-16), Software Development or Modification Services

2.3 SACC Manual Clauses

K3410C (2015-02-25), Canada to Own Intellectual Property Rights in Foreground Information

K3305C (2008-05-12), License to Intellectual Property Rights in Foreground Information

3. Security Requirement

3.1 The following security requirement (SRCL and related clauses) applies and form part of the Contract.

SECURITY REQUIREMENT FOR CANADIAN SUPPLIER: PWGSC FILE #: W7701-156004

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid Designated Organization Screening (DOS), issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).

This contract includes access to controlled goods. Prior to access, the contractor must be registered in the Controlled Goods Program of Public Works and Government Services Canada.

2. The Contractor/Offeror personnel requiring access to PROTECTED information, assets or sensitive work site(s) must EACH hold a valid RELIABILITY STATUS, granted or approved by CISD/PWGSC.

-
3. The Contractor/Offeror MUST NOT remove any PROTECTED information or assets from the identified work site(s), and the Contractor/Offeror must ensure that its personnel are made aware of and comply with this restriction.
 4. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of CISD/PWGSC.
 5. The Contractor/Offeror must comply with the provisions of the:
 - (a) Security Requirements Check List and security guide (if applicable), attached at Annex D;
 - (b) Industrial Security Manual (Latest Edition).

3.2 Visit Clearance Requests for Employees

As soon as the contract is awarded, the supplier will be required to obtain, without delay, visit clearance from ISS for each of its employees assigned to the contract.

Suppliers must submit a request for visit to ISS using the form attached at Annex E.

A minimum lead time of 25 working days is required to obtain a visit clearance from ISS.

Without visit clearance, the supplier's employees will not have access to DRDC-Valcartier facilities, leaving the supplier liable for delays in delivery.

Suppliers can consult the ISS Web site on visit clearances at: <http://iss-ssi.pwgsc-tpsgc.gc.ca/msi-ism/index-eng.html> , chapter 6

4. Term of Contract

4.1 Period of Contract

The period of the Contract is from date of Contract to March 31, 2018 inclusive.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Annie Fournier
Title: Procurement Specialist
Public Works and Government Services Canada
Acquisitions Branch
601-1550, avenue d'Estimauville
Québec (Québec) G1J 0C7
Telephone: 418-649-2775
Facsimile: 418-648-2209
E-mail address: annie.fournier@pwgsc-tpsgc.gc.ca

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

5.2 Technical Authority *(to be inserted by Canada at contract award)*

The Technical Authority for the Contract is:

Name :
Title :
Organization :
Address :

Telephone:
Facsimile:
E-mail address:

The Technical 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 Technical Authority; however, the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

5.3 Contractor's Representative

Administrative representative :

Name : _____
Telephone : _____
Facsimile : _____
Email : _____

Technical representative :

Name : _____
Telephone : _____
Facsimile : _____
Email : _____

5.4 Procurement Authority

The Procurement Authority for the Contract is: *(to be inserted by Canada at contract award)*

_____ (Name of Procurement Authority)
_____ (Title)
_____ (Organization)
_____ (Address)

Telephone: _____
Facsimile: _____
E-mail: _____.

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

6. Proactive Disclosure of Contracts with Former Public Servants

SACC Manual Clause A3025C (2013-03-21)

7. Payment

7.1 Basis of Payment

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work, as determined in accordance with the Basis of Payment in Annex B, to a limitation of expenditure of \$_____ (**to be completed by Canada at contract award**). Customs duties are included, and Applicable Taxes are extra.

7.2 Limitation of Price

7.2.1 Limitation of Expenditure

1. Canada's total liability to the Contractor under the Contract must not exceed \$_____ (**to be completed by Canada at contract award**). Customs duties are included, and Applicable Taxes are extra.
2. No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
 - (a) when it is 75 percent committed, or
 - (b) four (4) months before the Contract expiry date, or
 - (c) as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,whichever comes first.
3. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

7.3 Method of Payment

7.3.1 Progress Payments

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work up to 90 percent of the amount claimed and approved by Canada if:
 - (a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111(<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>), Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

-
- (b) the amount claimed is in accordance with the Basis of payment;
 - (c) the total amount for all progress payments paid by Canada does not exceed 90 percent of the total amount to be paid under the Contract;
 - (d) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.
2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted.
 3. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the right to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

7.4 Funding By Fiscal Year

Despite the Total Cost (limitation of expenditures), and unless otherwise authorized in writing by the Contracting Authority, the maximum amount which may be paid for work completed in the period ending 31 March of the year specified is as follows:

- Period from contract award to 31 March 2016: \$190,000.00
- Period of 1st April 2016 to 31 March 2017: \$310,000.00
- Period of 1st April 2017 to 31 March 2018: \$330,000.00

7.5 SACC Manual Clauses

A9117C (2007-11-30), T1204 - Direct Request by Customer Department

C0305C (2008-05-12), Cost Submission

7.6 Discretionary Audit

SACC Manual Clause C0705C (2010-01-11), Discretionary Audit

8. Invoicing Instructions - Progress Claim

1. The Contractor must submit a claim for progress payment using form PWGSC-TPSGC 1111 (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>), Claim for Progress Payment.

Each claim must show:

- (a) all information required on form PWGSC-TPSGC 1111;
- (b) all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;

Each claim must be supported by:

- (a) a copy of time sheets to support the time claimed;

-
- (b) a copy of the invoices, receipts, vouchers for all direct expenses, and all travel and living expenses;
 - (c) a copy of the monthly progress report.
2. Applicable Taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.
3. The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Contracting Authority for certification.

ATTN: Mrs Micheline Cauchon-Gravel
Public Works and Government Services Canada
601-1550 D'Estimauville
Québec, QC.
G1J 0C7

The Contracting Authority will then forward the original and two (2) copies of the claim to the Technical Authority for appropriate certification after inspection and acceptance of the Work takes place, and onward submission to the Payment Office for the remaining certification and payment.

4. The Contractor must not submit claims until all work identified in the claim is completed.

9. Certifications

9.1 Compliance

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the entire contract period. If the Contractor does not comply with any certification, provide the related documentation or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

9.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

9.3 SACC Manual Clauses

A3060C (2008-05-12), Canadian Content Certification

10. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (**to be inserted at contract award**).

11. 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 4002 (2010-08-16) - Software Development or Modification Services;
- (c) the general conditions 2040 (2015-07-03) – General conditions – Research and Development;
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) Annex C, Contractor Disclosure of Foreground Information;
- (g) Annex D, Security Requirements Check List;
- (h) Annex E, Request for Visit Form;
- (i) Attachment 1, Financial Bid Presentation Sheet
- (j) Attachment 2, Mandatory and Point Rated Technical Criteria
- (k) the Contractor's bid dated _____ **(to be inserted by Canada at contract award)**

12. Defence Contract

SACC Manual clause A9006C (2012-07-16), Defence Contract

13. Foreign Nationals (Canadian Contractor)

SACC Manual clause A2000C (2006-06-16), Foreign Nationals (Canadian Contractor)

14. Insurance

SACC Manual clause G1005C (2008-05-12), Insurances

15. Controlled Goods Program

15.1 SACC Manual clause A9131C (2011-05-16), Controlled Goods Program

15.2 SACC Manual clause B4060C (2011-05-16), Controlled Goods

16. Progress Reports

1. The Contractor must submit monthly reports, in electronic format, on the progress of the Work, to both the Technical Authority and the Contracting Authority.
2. The progress report must contain three parts:
 - (a) PART 1: The Contractor must answer the following three questions:
 - (i) Is the project on schedule?
 - (ii) Is the project within budget?
 - (iii) Is the project free of any areas of concern in which the assistance or guidance of Canada may be required?

Each negative response must be supported with an explanation.

-
- (b) PART 2: A narrative report, brief, yet sufficiently detailed to enable the Technical Authority to evaluate the progress of the Work, containing as a minimum:
- (i) A description of the progress of each task and of the Work as a whole during the period of the report. Sufficient sketches, diagrams, photographs, etc., must be included, if necessary, to describe the progress accomplished.
 - (ii) An explanation of any variation from the work plan.
 - (iii) A description of trips or conferences connected with the Contract during the period of the report.
 - (iv) A description of any major equipment purchased or constructed during the period of the report.
- (c) PART 3: The "Contract Plan and Report Form", PWGSC-TPSGC 9143 (<http://publiservice-app.tpsgc-pwgsc.gc.ca/forms/pdf/9143.pdf>), (or an equivalent form acceptable to the Contracting Authority) showing the following:
- (i) Actual and forecast expenditure on a monthly basis for the period being covered. (Expenditures are to be outlined by month and by task.)
 - (ii) Progress of the Work against the Contractor's original Contract Plan (instructions for showing the above on the Contract Plan are detailed in Annex "A" attached). The form will provide the basis for planning and estimating the cost of work, and reporting actual progress and cost against the plan during contract performance.

17. Canadian Forces Site Regulations

The Contractor must comply with all standing orders or other regulations, instructions and directives in force on the site where the Work is performed.

18. Identification Badge

SACC Manual clause A9065C (2006-06-16), Identification Badge

ATTACHMENT 1

FINANCIAL BID PRESENTATION SHEET

1. **LABOUR:** at firm rates, inclusive of overhead and of profit, GST/HST extra, in accordance with the following:

TOTAL ESTIMATED LABOUR: \$ _____

Note to bidders:

- a) Bidders should indicate firm rates (inclusive of overhead and of profit) for each category of labour required and for each period.
- b) Bidders should indicate an estimated total number of hours for each category of resource.

If the resource is working under sub-contract, the Bidder should indicate the name of the Subcontractor.

Labour Category	Hourly Firm Rate							Total by category
	Duration of proposed contract							
	Estimated effort for each category	From date of award to March 31 2016	Estimated total number of hours	From April 1 2016 to March 31 2017	Estimated total number of hours	April 1 2017 to March 31 2018	Estimated total number of hours	
a) Project Manager Names :	10%	\$		\$		\$		\$
b) Specialist (physics, optics) Names :	40%	\$		\$		\$		\$
c) Specialist (software, algorithm, computer sciences) Names :	30%	\$		\$		\$		\$
d) Specialist (systems engineer, trials specialist) Names :	10%	\$		\$		\$		\$

e) Technician (mechanical, electro-optical)	10%	\$	\$	\$	\$
Names :					

Items 2 through 5 shall be completed if the Bidder's rates in 1. above do not include the following:

2. EQUIPMENT: at laid down cost without markup

Description

(a)

(b)

TOTAL ESTIMATED EQUIPMENT: \$ _____

3. MATERIALS AND SUPPLIES: at laid down cost without markup

Description

(a)

(b)

TOTAL ESTIMATED MATERIALS AND SUPPLIES: \$ _____

4. SUBCONTRACTS: at actual cost without markup

The bidder cannot propose resources in this Section; all resources must be proposed at the Labour Section.

Support for the proposed subcontractor's price is required in the same details as that required for the Bidder's price. The estimated price for subcontracts should include all direct charges and travel & living expenses which would be to the account of the subcontractor.

TOTAL ESTIMATED SUBCONTRACTS: \$ _____

5. TRAVEL & LIVING: at actual cost without markup but not to exceed the limits of the Treasury Board Travel Directive. With respect to the TB Travel Directive, only the meal, private vehicle and incidental allowances specified in Appendices B, C and D of the TB Travel Directive <http://www.tbs-sct.gc.ca/hr-rh/gtla-vgcl/> and the other provisions of the directive referring to "travellers" rather than those referring to "employees", are applicable. *Details are to be provided on a separate sheet.*

TOTAL ESTIMATED TRAVEL & LIVING: \$ _____

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W7701-15-6004

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-5-38010

Buyer ID – id de l'acheteur
qcl 038

TOTAL ESTIMATED COST TO A LIMITATION OF EXPENDITURE: \$ _____
(GST/HST extra)

With the exception of the firm rate(s) and price(s), the amounts shown in the various items specified above are estimates only. Minor changes to these estimates will be accepted for billing purposes as the Work proceeds, provided that these changes have the prior approval of the Technical Authority, and provided that the estimated cost does not exceed the aforementioned Limitation of Expenditure.

ATTACHMENT 2

MANDATORY AND POINT RATED TECHNICAL CRITERIA

1. Mandatory Technical Criteria

At bid closing time, the Bidder must comply with the following mandatory technical criteria and provide the necessary documentation to support compliance. Any bid which fails to meet the following mandatory technical criteria will be declared non-responsive. Each criterion should be addressed separately.

The project manager must:

1. Have a degree in Engineering;
2. Have coordinated at least two field trials;
3. Have managed at least four R&D projects, each with the following minimum scope: two full-time staff members and an average monthly budget of \$15,000.00.

2. Rated Criteria

To be considered compliant, a proposal must:

- a) have obtained the minimum rating for each group of criteria; and
- b) have obtained a minimum overall rating of 75/125.

Proposals that do not meet the mandatory criteria set out in (a) and (b) will be given no further consideration.

The maximum result of the rated requirements is 125 points. The selection will be based on the highest responsive combined rating of technical merit and price, provided that the total evaluated price does not exceed the budget available for this requirement. The best combined rated (70%) and financial (30%) proposal within the established budget limit will be recommended for contract award.

Description	Minimum Points	Maximum Points
1. Bidder's experience	12	20
2. Management proposal	9	15
3. Technical proposal	24	40
4. Resource experience	30	50
TOTAL:	75	125

	Description	Evaluation Scale	Minimum	Maximum
1	<p>Bidder’s Experience</p> <p>If it is not possible to demonstrate the bidder’s experience, no points will be awarded for that rated criterion.</p> <p>The following are examples of the type of information that should be provided for each project being described: project name and/or contract number, project description, description of work tasks, project length, exact dates (start month/year and end month/year), client name and contact information.</p>		12	20
1.	<p>Bidder’s experience with similar R&D projects within the past 10 years</p> <p>Bidder’s experience in executing R&D projects relating to development in LWIR polarization: modeling and system evaluation.</p> <p>The bidder should demonstrate its experience by presenting projects executed in this area of expertise. Each project should be described in sufficient detail to allow the evaluation team to properly assess the bidder’s experience.</p>	<p>10 – 3 or more projects.</p> <p>6 – 1 or 2 projects.</p> <p>0 – 0 projects.</p>	6	10
2.	<p>Bidder’s experience in R&D field trial support.</p> <p>Bidder’s experience in providing technical support and field trial management.</p> <p>The bidder should demonstrate its</p>	<p>10 - The bidder has participated in at least 10 field trials.</p> <p>8 - The bidder has participated in at least 7 field trials.</p>	6	10

	<p>experience by presenting projects executed in this area of expertise. Each project should be described in sufficient detail to allow the evaluation team to properly assess the bidder’s experience.</p>	<p>6 - The bidder has participated in at least 5 field trials.</p> <p>4 - The bidder has participated in at least 3 field trials.</p> <p>0 - The bidder has participated in less than 3 field trials.</p>		
2	Management Proposal		9	15
1.	<p>Human resources allocation</p> <p>The bidder should propose an appropriate project structure and organization to carry out and meet the contract objectives in engineering, test logistics and management support for the project. In addition, the bidder should describe its team organization, including hierarchical structure, availability of team members and capacity to replace resources (backup), and demonstrate its capacity to deliver the project in the time allotted.</p> <p>The bidder should assign all of the resources to the various project tasks and sub-tasks. Resources should be assigned to tasks that correspond to their area of</p>	<p>(1) Team organization:</p> <p>5 - Excellent: All required elements are present. Roles, responsibilities and assignments are clearly described and meet needs.</p> <p>3 - Good: All required elements are present. Several roles, responsibilities and assignments are clearly described and meet needs.</p> <p>1 - Fair: Several required elements are missing. Only a few roles, responsibilities and assignments are clearly described and meet needs.</p> <p>0 - Any other situation.</p> <p>(2) Distribution of technical expertise for various tasks:</p>	6	10

	expertise.	<p>5 - The level of effort attributed to each team resource is satisfactory, and all assigned tasks are appropriate to each resource's expertise.</p> <p>3 - At least 80% of the level of effort attributed to each team resource is satisfactory, and most assigned tasks are appropriate to each resource's expertise.</p> <p>1 - At least 60% of the level of effort attributed to each team resource is satisfactory, and most assigned tasks are appropriate to each resource's expertise.</p> <p>0 - Any other situation.</p>		
2.	<p>Effort allocation</p> <p>The bidder should propose a work schedule that includes a work breakdown structure.</p> <p>The work schedule should respect project deadlines. The effort level allocated to each task and sub-task should be appropriate and realistic, and should ensure that project objectives are met.</p>	<p>5 - There is a realistic number of resources assigned to each project task, given project time and budget requirements.</p> <p>3 - There is a realistic number of resources assigned to at least 80% of project tasks, given project time and budget requirements.</p> <p>1 - There is a realistic number of resources assigned to at least 60% of project tasks, given project time and budget requirements.</p> <p>0 - Any other situation.</p>	3	5
3	Technical Proposal		24	40
1.	<p>Development of methods for measuring optical constants in the LWIR</p> <p>The bidder should demonstrate</p>	<p>(1) Understanding of challenges anticipated:</p> <p>3 - The bidder has identified and provided a list of major challenges</p>	5	10

	<p>the feasibility and relevance of its technical approach, challenges anticipated and solutions for the development of measurement methods for optical constants. The experimental approach for measuring optical constants must be based on equipment available at DRDC Valcartier; i.e. FTIR spectrometers, spectral reflectometers and spectroscopic ellipsometers for LWIR.</p>	<p>anticipated for the development of methods for measuring optical constants in LWIR, and has provided appropriate solutions for the development of these methods. 2 - The bidder has identified some (but not all) relevant challenges to be anticipated in the development of methods for measuring optical constants in LWIR and for each challenge identified, has provided appropriate solutions for the development of these methods. 1- The bidder has identified challenges anticipated for the development of methods for measuring optical constants in LWIR, but for each challenge identified, has not provided appropriate solutions for the development of these methods. 0 - Any other situation.</p> <p>(2) Proposed technical approach:</p> <p>4 - The proposed technical approach for the measurement of optical constants in materials in LWIR is appropriate for carrying out the required work. It takes all parameters and constraints into account, and provides appropriate solutions for the development of a rigorous method (all major optical parameters have been taken into account) for measuring optical constants in LWIR. 2 - The proposed technical approach for measuring optical constants in materials in LWIR is relevant, but does not take into account all parameters involved in carrying out the required work. It only takes some parameters into account, and provides solutions for the development of an approximate method (for the partial list of major optical parameters) for the measurement of optical constants in LWIR.</p>		
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		<p>0 - Any other situation.</p> <p>(3) Proposed equipment:</p> <p>3 - The equipment proposed for measuring optical constants is appropriate for the required work. The list of proposed equipment is sufficient.</p> <p>1 - The equipment proposed for measuring optical constants is appropriate for the required work. However, the list of proposed equipment is not complete; the bidder has not identified certain key equipment.</p> <p>0 - Any other situation.</p>		
	<p>2. Mathematical model for polarization and Bidirectional Reflectance Distribution Function (BRDF)</p> <p>The bidder should demonstrate the feasibility and relevance of its technical approach, challenges anticipated and solutions for the development of a mathematical model describing the spectral properties of surface polarization and BRDF.</p>	<p>5 - The bidder has satisfactorily demonstrated the feasibility of its approach and provided a list of the major challenges anticipated for the development of a mathematical model describing the spectral properties of surface polarization and BRDF. The bidder has provided appropriate solutions for the development of the model.</p> <p>4 - The bidder has satisfactorily demonstrated the feasibility of its approach and provided a list of the major challenges anticipated for the development of a mathematical model describing the spectral properties of LWIR polarization. The bidder has provided partial yet satisfactory solutions for the development of the model.</p> <p>3 - The bidder has satisfactorily demonstrated the feasibility of its approach and identified some (but not all) relevant challenges anticipated in the development of a mathematical model describing the spectral properties of LWIR polarization. For the challenges identified, the bidder has</p>	4	5

		<p>provided appropriate solutions for the development of the model.</p> <p>2 - The bidder has partially demonstrated the feasibility of its approach and identified some (but not all) relevant challenges anticipated for the development of a mathematical model describing the spectral properties of LWIR polarization. For the challenges identified, the bidder has provided at least one appropriate solution for the development of the model.</p> <p>1 - The bidder has partially demonstrated the feasibility of its approach and has identified a few relevant challenges for the development of a mathematical model describing the spectral properties of LWIR polarization. The bidder only identified some of the challenges anticipated, and did not propose solutions, or proposed inappropriate solutions.</p> <p>0 – Any other situation.</p>		
	<p>3. Detection algorithms</p> <p>The bidder should demonstrate the feasibility and relevance of its technical approach, challenges anticipated and solutions for the development of detection algorithms and target identification based on spectral polarization in LWIR.</p>	<p>5 - The bidder has satisfactorily demonstrated the feasibility of its approach and provided a list of the major challenges anticipated for the development of detection algorithms and target identification based on spectral polarization in LWIR. The bidder has provided appropriate solutions for the development of the model.</p> <p>4 - The bidder has satisfactorily demonstrated the feasibility of its approach and provided a list of the major challenges anticipated for the development of detection algorithms and target identification based on spectral polarization in LWIR. The bidder has provided partial yet</p>	3	5

		<p>satisfactory solutions for the development of the model.</p> <p>3 - The bidder has satisfactorily demonstrated the feasibility of its approach and identified some (but not all) relevant challenges anticipated for the development of detection algorithms and target identification based on spectral polarization in LWIR. For the challenges identified, the bidder has provided appropriate solutions for the development of the model.</p> <p>2 - The bidder has partially demonstrated the feasibility of its approach and identified some (but not all) relevant challenges anticipated for the development of detection algorithms and target identification based on spectral polarization in LWIR. For the challenges identified, the bidder has provided at least one appropriate solution for the development of the model.</p> <p>1 - The bidder has partially demonstrated the feasibility of its approach and has identified a few relevant challenges for the development of detection algorithms and target identification based on spectral polarization in LWIR. The bidder only identified some of the challenges anticipated, and did not propose solutions, or proposed inappropriate solutions.</p> <p>0— Any other situation.</p>		
4.	<p>Field trials</p> <p>The bidder should demonstrate the feasibility and relevance of its technical approach, as well as challenges anticipated for field</p>	<p>5 - The bidder has satisfactorily demonstrated the feasibility of its approach and provided a list of the major challenges anticipated for field trials. The bidder has provided appropriate solutions for the development of these field trials.</p>	3	5

	<p>trials designed to test the method and analyze the results of LWIR spectral polarization target detection.</p>	<p>3 - The bidder has satisfactorily demonstrated the feasibility of its approach and identified some (but not all) relevant challenges anticipated for field trials. For the challenges identified, the bidder has provided appropriate solutions for the development of these field trials.</p> <p>1 - The bidder has partially demonstrated the feasibility of its approach and identified some (but not all) relevant challenges anticipated for field trials. For the challenges identified, the bidder has provided at least one appropriate solution for the development of field trials.</p> <p>0 - Any other situation.</p>		
5.	<p>Communication and quality control</p> <p>The bidder should describe the quality control plan it intends to use for this contract, as well as the communications plan.</p> <p>The bidder should also demonstrate that both of these plans have been tested and proven to be effective in previous projects (describe a maximum of two previous experiences per type of plan).</p>	<p>(1) Quality Control Plan:</p> <p>3 - The quality control plan is well described. The bidder has provided each step of the process. The steps are coherent and realistic.</p> <p>2 - The description of the quality control plan falls somewhere between the description above and the description below.</p> <p>1 - The bidder has given a basic description of its quality control plan.</p> <p>0 - Any other situation.</p> <p>(2) Demonstration:</p> <p>2 - The bidder has clearly demonstrated that its quality control plan has been successfully applied and</p>	6	10

		<p>proven in previous projects—at least two previous experiences have been described.</p> <p>1 - The bidder has clearly demonstrated that its quality control plan has been successfully applied and proven in previous projects—at least one previous experience has been described.</p> <p>0 - Any other situation.</p> <p>(3) Communication Plan:</p> <p>3 - The proposed communication plan is well described. The bidder has described each step of the process. The plan allows for the rapid transmission of information and includes stakeholders.</p> <p>2 - The proposed communication plan is fairly well described, but some steps of the process are incomplete. The plan allows for the rapid transmission of information and includes stakeholders.</p> <p>1 - The bidder gives a basic description of its communication plan.</p> <p>0 - Any other situation.</p> <p>(4) Demonstration:</p> <p>2 - The bidder has clearly demonstrated that its communication plan has been successfully applied and</p>		
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		<p>proven in previous projects—at least two previous experiences have been described.</p> <p>1 - The bidder has clearly demonstrated that its communication plan has been successfully applied and proven in previous projects—one previous experience has been described.</p> <p>0 - Any other situation.</p>		
6.	<p>Risks and Solutions</p> <p>The bidder should clearly identify direct and indirect risks involved in this project and propose appropriate solutions within the limits of project resources.</p> <p>The bidder should also demonstrate its capacity to assess risks and proposed solutions within the scope of previous projects involving risks similar to those identified for this project (describe at least one previous experience).</p>	<p>5 - The bidder has conducted a satisfactory assessment of the risks involved in this project and satisfactorily demonstrated its capacity to assess risks based on at least one previous project. The bidder has provided appropriate solutions to mitigate risks within the limits of project resources.</p> <p>3 - The bidder has conducted a satisfactory assessment of the risks involved in this project and satisfactorily demonstrated its capacity to assess risks based on at least one previous project. The bidder has provided some (but not all) appropriate solutions to mitigate risks within the limits of project resources.</p> <p>2 - The bidder has conducted a relevant but incomplete assessment of the risks involved in this project and its capacity to assess risks. The bidder has provided some (but not all) appropriate solutions to mitigate risks within the limits of project resources.</p> <p>1 - The bidder has conducted a relevant but incomplete assessment of the risks involved in this project and its capacity to assess risks. The bidder has not proposed solutions to mitigate risks, or</p>	3	5

		has proposed inappropriate solutions. 0 - Any other situation.		
4	Resource Experience For the criteria in this section, only resources involved in at least 5% of the total number of project hours will be considered for evaluation.		30	50
1.	Bidder’s proposed resources’ experience in LWIR spectral polarization The bidder should demonstrate that its proposed resources have experience in modeling and characterizing the spectral properties of the polarization of liquid and solid materials, specifically in long wave infrared (LWIR) for wavelengths between 7 and 14 microns. The proposed resources should have experience in the following areas of expertise: a) Experimental determination of spectral optical constants of materials in LWIR; b) Calculation and measurement of spectral reflectance, transmittance and radiance factors associated with surfaces and layers of liquid and solid materials; c) Modeling of the effects of	15 - One or more of the proposed resources has carried out at least two LWIR spectral polarization projects in each of the three identified areas of expertise. 13 - One or more of the proposed resources has carried out a LWIR spectral polarization project in each of the three identified areas of expertise. 11 - One or more of the proposed resources has carried out at least one LWIR spectral polarization project in two of the three identified areas of expertise. 9 - One or more of the proposed resources has carried out at least one LWIR spectral polarization project in one of the three identified areas of expertise. 4 - One or more of the proposed resources has carried out at least one LWIR spectral polarization project in an area of expertise other than those identified.	9	15

	<p>surface roughness on the spectral properties of materials in LWIR.</p> <p>To demonstrate that it possesses the expertise required, the bidder should describe projects carried out by its proposed resources in the above areas. The project description should be sufficient to allow the evaluation team to understand the proposed resources’ experience. If experience is not sufficiently demonstrated, no points will be awarded to the bidder for that criterion.</p> <p>The following are examples of the type of information that should be provided for each project being described: project name and/or contract number, project description, description of the tasks performed by the proposed resource and number of weeks required to perform each project task, project length, exact dates (start month/year and end month/year) of the proposed resource’s involvement in the project, client name and contact information.</p>	<p>0 - Any other situation.</p>		
<p>2.</p>	<p>Bidder’s proposed resources’ experience in using LWIR spectral and polarimetric measurement technologies</p> <p>The bidder should demonstrate</p>	<p>15 - One or more of the proposed resources has carried out at least two projects using LWIR spectral and polarimetric measurement technologies and using each of the three identified technologies.</p> <p>13 - One or more of the proposed</p>	<p>9</p>	<p>15</p>

	<p>that its proposed resources have experience in using technologies associated with taking LWIR spectral and polarimetric measurements, including:</p> <p>a) Fourier transform infrared spectroscopy (FTIR) for LWIR spectral and polarimetric characterization of surfaces and materials;</p> <p>b) Infrared ellipsometer technology for determining optical constants in materials in LWIR;</p> <p>c) Infrared polarimetric imaging technology for spatial characterization of targets in LWIR.</p> <p>To demonstrate that it possesses the required experience, the bidder should describe projects carried out by its proposed resources in the above areas. The project description must be sufficient to allow the evaluation team to understand the proposed resources’ experience. If experience is not sufficiently demonstrated, no points will be awarded to the bidder for that criterion.</p> <p>The following are examples of the type of information that should be provided for each project being described: project name and/or contract number, project description, description of the</p>	<p>resources has carried out one project using LWIR spectral and polarimetric measurement technologies and using each of the three identified technologies.</p> <p>11 - One or more of the proposed resources has carried out at least one project using LWIR spectral and polarimetric measurement technologies and using two of the three identified technologies.</p> <p>9 - One or more of the proposed resources has carried out at least one project using LWIR spectral and polarimetric measurement technologies and using one of the three identified technologies.</p> <p>4 - One or more of the proposed resources has carried out at least one project using LWIR spectral and polarimetric measurement technologies and using a technology other than those identified.</p> <p>0 - Any other situation.</p>		
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	tasks performed by the proposed resource and number of weeks required to perform each project task, project length, exact dates (start month/year and end month/year) of the proposed resource’s involvement in the project, client name and contact information.			
3.	<p>Education and expertise of proposed resources in:</p> <ul style="list-style-type: none"> - LWIR spectral polarization modeling and measurement; - Algorithm development; - PYTHON programming. <p>To enable the evaluation team to properly evaluate this criterion, the bidder should attach a CV for each proposed resource.</p> <p>For this criterion, the qualifications sought are divided into four categories:</p> <p>1) Education:</p> <ul style="list-style-type: none"> a. Doctorate in optical physics; b. Doctorate in electrical engineering, physics, engineering physics or computer engineering; c. Bachelor’s degree or above in electrical engineering, physics, engineering physics or computer engineering. 	<p>Evaluation through qualification:</p> <p>(1) Education:</p> <p>The proposed resource team includes:</p> <p>5— at least 3 different resources possessing the required education, with at least one corresponding to each education level identified (a, b and c).</p> <p>4 - at least 2 different resources with a doctorate corresponding to education categories a and b (at least one resource for category a and at least one other resource for category b).</p> <p>2 - at least 2 different resources, at least one of which has a doctorate for category a and at least one other resource with the education level for category c.</p> <p>1 - at least 2 different resources with two of the three education levels identified (a, b and c).</p> <p>0 - Any other situation.</p> <p>(2) Expertise and experience in LWIR</p>	12	20

	<p>2) Expertise and experience in LWIR polarization modeling and measurement:</p> <p>Describe proposed resources’ experience in this specific area (LWIR polarization modeling and measurement) in terms of projects and months of experience. The bidder should provide the following information for each project: project name and/or contract number, project description, description of the tasks performed by the proposed resource and number of weeks required to perform each project task, project length, exact dates (start month/year and end month/year) of the proposed resource’s involvement in the project, client name and contact information.</p> <p>3) Resources’ expertise and experience in the development of spectral polarimetric remote target sensing algorithms:</p> <p>Describe proposed resources’ experience in this specific area (development of spectral polarimetric remote target sensing algorithms) in terms of projects and months of experience. The bidder should provide the following information</p>	<p>polarization modeling and measurement:</p> <p>The proposed resource team includes:</p> <p>5 - at least 2 resources with at least 24 months of experience in LWIR polarization modeling and measurement.</p> <p>4 - at least 2 resources with at least 12 months of experience in LWIR polarization modeling and measurement.</p> <p>2 - at least 1 resource with at least 24 months of experience in LWIR polarization modeling and measurement.</p> <p>1 - at least 1 resource with at least 12 months of experience in LWIR polarization modeling and measurement.</p> <p>0 - Any other situation.</p> <p>(3) Resources’ expertise and experience in the development of spectral polarimetric remote target sensing algorithms:</p> <p>The proposed resource team includes:</p> <p>5 - at least 2 resources with at least 24 months of experience in developing LWIR spectral polarimetric remote sensing algorithms.</p> <p>4 - at least 2 resources with at least 12 months of experience in developing</p>		
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	<p>for each project: project name and/or contract number, project description, description of the tasks performed by the proposed resource and number of weeks required to perform each project task, project length, exact dates (start month/year and end month/year) of the proposed resource’s involvement in the project, client name and contact information.</p> <p>4) Resources’ expertise and experience in PYTHON programming:</p> <p>Describe proposed resources’ experience in this specific area (PYTHON programming) in terms of projects and months of experience. The bidder should provide the following information for each project: project name and/or contract number, project description, description of the tasks performed by the proposed resource and number of weeks required to perform each project task, project length, exact dates (start month/year and end month/year) of the proposed resource’s involvement in the project, client name and contact information.</p>	<p>LWIR spectral polarimetric remote sensing algorithms.</p> <p>2 - at least 1 resource with at least 24 months of experience in developing LWIR spectral polarimetric remote sensing algorithms.</p> <p>1 - at least 1 resource with at least 12 months of experience in developing LWIR spectral polarimetric remote sensing algorithms.</p> <p>0 - Any other situation.</p> <p>(4) Resources’ expertise and experience in PYTHON programming:</p> <p>The proposed resource team includes:</p> <p>5 - at least 2 resources with at least 24 months of experience in PYTHON programming.</p> <p>4 - at least 1 resource with at least 24 months of experience in PYTHON programming.</p> <p>2 - at least 1 resource with at least 12 months of experience in PYTHON programming.</p> <p>1 - at least 1 resource with at least 6 months of experience in PYTHON programming.</p> <p>0 - Any other situation.</p>		
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Generic Evaluation Table

WEAK	ACCEPTABLE	GOOD	VERY GOOD	EXCELLENT
0 point	4 points	6 points	8 points	10 points
Lacks complete or almost complete understanding of the requirements. Or Did not submit information which could be evaluated or inadequate information submitted.	Has some understanding of the requirements.	Demonstrates a good understanding of the requirements.	Demonstrates a very good understanding of the requirements.	Demonstrates expert understanding of the requirements
Weaknesses cannot be corrected or doubtful that weaknesses can be corrected.	Generally, there is a good chance that weaknesses can be easily corrected.	Weaknesses can be easily corrected.	No significant weaknesses.	No apparent weaknesses.
Poor; insufficient to meet performance requirements or little capability to meet performance requirements.	Minimum acceptable capability, should meet minimum performance.	Satisfactory capability, should ensure effective results.	Very satisfactory capability, should ensure very effective results.	Superior capability, should ensure superior results

ANNEX A

STATEMENT OF WORK

Development in LWIR Polarization

1. General

1.1 Title

Development in long wave infrared polarization: modeling, system evaluation, technical support and trial management.

1.2 Purpose

Defence Research and Development Canada (DRDC) - Valcartier Research Centre is continuing its development of hyperspectral sensors in long wave infrared (LWIR) for target detection. To pursue its objectives, DRDC requires the services of a Contractor to perform the following tasks:

- evaluation of the performance of broadband multi-spectral infrared cameras (Polaris) and four Fourier transform infrared (FTIR) spectrometers for measuring optical constants, and evaluation of infrared polarimetric hyperspectral sensors for surveillance ;
- preparation and coordination of test logistics and project management support;
- modeling and characterization of phenomenology, polarized optical signatures and bidirectional reflectance distribution functions (BRDF) in long wave infrared (LWIR); and
- development, programming and implementation of detection and identification algorithms and user interfaces for polarization detection.

1.3 Background/History

The DRDC Valcartier Research Centre has developed unique expertise and methodology in remote detection and identification of chemical gas clouds through the development of a prototype, known as Compact Atmospheric Sounding Interferometer (CATSI) and subsequently, two technical development models for a state-of-the-art interferometer, Engineering Development Model (CATSI EDM) and its algorithm Chemical Agent Spectral Signature Detection and Identification (CASSIDI). This technology uses differential FTIR radiometry optimized for optical subtraction. From 2007 to 2010, this technology was fine tuned to add polarization and imaging in the development of a Multi-option Differential Detection and Imaging Fourier Spectrometer (MoDDIFS) research prototype. MoDDIFS was demonstrated and tested for gas detection, but is used more specifically for studying and validating concepts relating to the detection of surface contaminants through its polarization option. A new innovative instrument, Polarized-improved CATSI (P-iCATSI), was developed and delivered in early 2013. It offers alternative field-of-view and data capture options for the program at the DRDC Valcartier Research Centre.

Since 2011, in parallel with the development of these sensors, the DRDC Valcartier Research Centre has had another contract to enable it to address the phenomenology of polarized optics in LWIR and its modeling, development of methodologies for measuring optical constants, development of algorithms and softwares for detection/identification applications and their implementation in its two polarized sensors, as well as conducting numerous field experiments to test algorithms. New efforts by the DRDC Valcartier Research Centre are focused on continuing its work to fine tune detection methodologies involving polarization in LWIR to detect solid and liquid targets, and IR polarization phenomenology and spectral signatures of those targets will continue to be investigated.

1.4 Acronyms

BRDF	bidirectional reflectance distribution function
CASSIDI	Chemical Agent Spectral Signature Detection and Identification
CATSI	Compact ATmospheric Sounding Interferometer
EDM	Engineering Development Model
LWIR	Long Wave Infrared
FTIR	Fourier Transform InfraRed
MoDDIFS	Multi-option Differential Detection and Imaging Fourier Spectrometer
MODTRAN	Moderate resolution atmospheric TRANsmission
p-BRDF	Polarized BRDF
P-iCATSI	Polarized-improved CATSI
DRDC	Defence Research and Development Canada
TA	Technical Authority

2. APPLICABLE DOCUMENTS (references)

There are no applicable reference documents.

3. SCOPE OF WORK

The tasks defined herein aim at supporting the DRDC Valcartier Research Centre's latest efforts in the development and implementation of hyperspectral sensors in the LWIR for the detection and identification of surface contaminants and targets by procuring the following technical services:

- for the modelling and characterization of polarized optical signature phenomenology and the BRDF;
- for system evaluation, test logistics and project management support for the development of new capacities; and
- for the development, programming and implementation of detection and identification algorithms and their user interface for MoDDIFS and P-iCATSI sensors.

3.1 **Studies, Modeling and Characterization of the Phenomenology of Polarized Optical Signatures in LWIR**

3.1.1 The Contractor must conduct characterization studies into the phenomenology of polarized optical signatures in LWIR and develop one or more mathematical models designed to reproduce the identified phenomena for surface contaminants and typical solid/liquid targets of different sizes (from a few centimetres (for surface phenomena) to several meters (for topological phenomena)).

3.1.2 The Contractor must validate the proposed model(s) with optical constants measured in a laboratory and by conducting field experiments.

3.1.3 The Contractor must determine the need to develop a polarized BRDF (p-BRDF) database in the LWIR hyperspectral band. Initially, the Contractor must conduct a literature review and prepare a strategy and development plan on its usefulness and application in the detection and identification of solid and liquid targets in the LWIR hyperspectral band.

3.1.4 Once the conclusions of task 3.1.3 have been evaluated and the task 3.1.3 development plan has been accepted by the Technical Authority (TA), the Contractor must perform the following:

- a. Design and develop a simple device or modification of the CATSI device to take p-BRDF and BRDF measurements;
- b. Take laboratory measurements of typical targets using the device developed;
- c. Develop a mathematical model demonstrating the observed p-BRDF phenomenology;
- d. Develop and install a storage solution and a database for polarized and non-polarized BRDF measurements; and
- e. Validate proposed model(s) with optical constants measured in a laboratory.

3.1.5 The Contractor must develop a performance predictor for the detection and identification of solid and liquid targets by P-iCATSI and MoDDIFS polarized and non-polarized sensors, respectively, in the LWIR hyperspectral band.

3.1.6 The Contractor must develop an environmental scenario, target and spectral scenario simulator, which integrates MODTRAN and DIRSIG, in order to generate hyperspectral spectrums for the evaluation of detection tools.

3.1.7 The Contractor must assess the value added and determine the benefits of using polarization components at +45° and -45°, or using a rotating polarizer element that makes it possible to gather linear polarization information by analyzing Fourier components in the captured signal, rather than simply the vertical and horizontal polarization components, to improve the detection and identification of solid and liquid targets.

3.1.8 The Contractor must conduct characterization studies into the phenomenology of polarized optical signatures obtained using broadband multispectral sensors (visible in LWIR) in order to use these signatures as a trigger for identification with LWIR hyperspectral sensors.

3.1.9 The Contractor must study the effects of contaminant aging on their polarimetric signature.

3.2 **Optical Constant Measurements**

3.2.1 The Contractor must take measurements of optical constants in approximately thirty samples of various solid and liquid materials in the infrared band as a function of wavelength to determine optical parameters n and k . The measurements will primarily be taken using the methodology developed with the LWIR ellipsometer and the CATSI device at DRDC — Valcartier Research Centre facilities. The Bruker reflectometer and other FTIR polarization spectrometers may also be used. The results shall be integrated into the database.

3.2.2 The Contractor must devise and propose a method for measuring optical constants in the IR band as a function of wavelength.

3.2.3 The Contractor must study the effects of surface roughness and the properties of dielectric-metal mixtures on the variation of optical constants, polarization properties, and the capacity for detection and identification of surface contaminants and other targets.

3.3 **Laboratory Trials and Field Experiments**

3.3.1a The Contractor must plan laboratory and field trials to be conducted at the DRDC Valcartier Research Centre (Room 302 Bldg. 25) and the Contractor must prepare the plans/protocols for these trials, which may be conducted at any time during the contract term. These laboratory and field trials will be conducted to test the accuracy of optical constants and detection algorithms. In the laboratory, these trials will consist of mounting liquid and/or solid targets (approximately 12 inches by 12 inches) on an optical table in the laboratory and measuring

them with DRDC spectral sensors. In the field, the trials will consist of mounting the same targets outdoors and measuring them with DRDC spectral sensors.

3.3.1b The Contractor must plan two field trials to be conducted outside of the country (in the US). Each trial will span over a two-week period outside of Canada and the Contractor must prepare the plans/protocols for these trials. These two trials will be conducted at Fort A.P. Hill, Virginia. The first trial will be held in September 2016 and the second will be held in September 2017. The trials will consist of mounting a variety of targets on the trial site (A.P. Hill) and measuring the spectral characteristics with our field spectral sensors.

3.3.2 For tasks 3.3.1a and 3.3.1b, the Contractor must prepare, coordinate, attend and lead laboratory and field measurements and trials to evaluate the feasibility of detecting and identifying targets of interest.

3.3.3 For tasks 3.3.1a and 3.3.1b, the Contractor must analyze and present the results of laboratory and field trials in technical reports.

3.4 **Coordination and Development of Algorithms, User Software (in Python programming language), and a Database for Target Detection and Identification**

3.4.1 The Contractor must develop the basic detection and identification algorithm architecture.

3.4.2 The Contractor must develop the user interface in Python GUI so that detection and identification algorithms can be used for solid and liquid surface contaminants.

3.4.3 The Contractor must attend software meetings.

3.4.4 The Contractor must implement and test Python GUI algorithms and software for use in the MoDDIFS and P-iCATSI sensors.

3.4.5 The Contractor must define and develop scenarios to demonstrate the software and algorithm functionalities.

3.4.6 The Contractor must identify and evaluate the use of data processing algorithms in broadband polarized multispectral sensors (visible in LWIR) in order to use these signatures as a trigger for identification of targets in LWIR hyperspectral sensors with a much more restricted field of view, such as MoDDIFS and P-iCATSI.

3.4.7 The Contractor must design and implement a database to classify and facilitate accessibility and rapid identification of hyperspectral measurements of polarized and non-polarized targets from multiple sources (potentially from visible sources to LWIR), as well as trial factors, characteristics of targets and sensors, and environmental conditions when the measurements were taken. This database could also include the one described in section 3.1.4 d.

3.5 **Project Management and Conference Participation**

3.5.1 The Contractor must provide revision, preparation and updates of project documents as defined in section 4.2.1 below.

3.5.2 The Contractor must plan, coordinate, execute, track and provide the necessary documentation for the following project activities:

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- a. Communication with project team members, industry representatives, and the TA;
 - b. Laboratory and field trials; and
 - c. Preparation and updating of project documents as defined in section 4.2.1 below.

3.5.3 The Contractor must prepare and participate in the preparation of presentations and technical documents to be presented at conferences.

3.5.4 The Contractor must attend and actively participate in a SPIE technical conference (US) on infrared polarimetry (San Diego, August 2016 or 2017). This conference will extend over one week. Preparation of business documents as defined in section 4.2.2 below.

4. REPORTS AND OTHER DELIVERABLES

Deliverables must be submitted in compliance with this statement of work.

4.1 Deliverables

Deliverable number	Task/sub-task	Description	Date to be submitted
1	3.1.1 and 3.1.2	Technical report summarizing studies, describing models in detail, and providing validation for each model.	12 months after contract award.
2	3.1.3	Technical report summarizing the results of the literature review, the strategy and the development plan.	3 months after contract award.
3	3.1.4	Following acceptance of the development plan (3.1.3), a final technical report will be submitted providing details on completed elements.	36 months after contract award.
4	3.1.5 and 3.1.6	Performance predictor software written in Python programming language. Scenario simulator software written in Python programming language.	24 months after contract award. and 24 months after contract award.
5	3.1.7, 3.1.8 and 3.1.9	Technical report combining analysis results for: (a) Use of polarization at +45° and -45° (3.1.7) (b) Broadband sensor signature (3.1.8) (c) Aging effects (3.1.9)	24 months after contract award.
6	3.2.1 and 3.2.2	Signature data integrated into the database and technical report in letter format summarizing the measurements taken.	Every 6 months after contract award.
7	3.2.3	Final technical report providing details on the study, conclusions and recommendations.	24 months after contract award.
8	3.3	For each trial, the Contractor must provide a technical report summarizing: (a) the main operations carried out during the trial, so that the trial can be properly characterized and reproduced, (b) problems encountered and their solutions, (c) results, (d) results analysis, and (e) recommendations.	1 month after the end of trials.
9	3.4	Software code and technical documentation: detection and identification algorithms and user software written in Python programming language. Database for classifying targets (3.4.7)	At each code iteration and enhancement and at minimum 12 months, 24 months and 36 months after contract award.
10	3.4.6	Analysis report on the use of broadband spectral sensors as a trigger for target identification (3.4.6).	12 months after contract award.

4.2 Updates of the Following Project Documents:

4.2.1 Deliverables for task 3.5.1

- a. Project schedule;
- b. Project progress documents (objectives, schedule, costs and resources).

4.2.2 Deliverables for task 3.5.5

- a. Minutes and presentations;
- b. Visit reports;
- a. Trial planning, preparation, execution and monitoring.

4.3 Number of Copies, Format and Review

4.3.1 Technical Reports

Technical reports will be submitted in one (1) copy, printed and bound. A PDF version must be included with all printed reports. The presentation format of these reports must comply with DRDC standards. These standards can be obtained from the project Technical Authority. Reports shall be submitted to the TA for a quality review. Reports will also be reviewed by an editorial committee for the sensitivity of the content. Once the reports have been reviewed and accepted by the TA, the final version will be delivered to the TA for publication.

4.3.2 Other Documents:

Other documents shall be submitted in a paper copy, a PDF electronic copy, and in their original Word format. Software will be documented and delivered in an electronic format. Software deliverables shall include a compiled version and a source code version with dependencies (external libraries) and compilation instructions.

4.3.3 Languages:

Written documents to be published or distributed externally (to be confirmed with the TA before they are written) must be provided in English. Other documents (for internal distribution) may be provided in English or French.

4.4 Publication

Any manuscript for publication in magazines, journals or other publications, as well as any abstracts of a presentation or any other form of publication, must first be submitted to the TA for review and approval ninety (90) days in advance of presentation or publication. An explicit reference regarding federal government funding must be included, and it must be clearly mentioned that the content is the authors' responsibility. The TA will provide a written objection if there are specific elements (e.g. audience) that are not in the federal government's best interests. If the TA objects in writing, he/she must send the written objection to the organization responsible for publication (journal or conference).

5. MEETINGS

5.1 Progress Meetings

5.1.1 Location of meetings:

All meetings will be held at the DRDC Valcartier Research Centre, or at the convenience of both parties. When a meeting is held at the Contractor's facilities, the Contractor must provide the space and necessary resources.

5.1.2 Preparation and participation:

The Contractor must make the necessary preparations to actively participate in all meetings. Meetings include project review, technical and design reviews with the project team, and project management discussions.

5.1.3 Minutes:

The Contractor must prepare minutes of all discussions and/or a record of decisions of the meeting(s) and must provide them to the TA, for review and approval, no later than five working days after each meeting.

5.1.4 Frequency:

Monthly.

5.2 **Kick-off Meeting**

At the beginning of the contract term, the Contractor must hold a start-up meeting at the DRDC Valcartier Research Centre. This meeting will serve to review project plans, contract requirements, services, risks and other related issues. It must be held during the first month following contract award.

5.3 **Final Meeting**

A final meeting is required to present the final contract reports. It must be held at the DRDC Valcartier Research Centre, during the final month of the contract.

6. GOVERNMENT- FURNISHED EQUIPMENT (GFE)

GFE, such as computers, hyperspectral sensors and test facilities will be provided to the Contractor by Canada and will be available at the DRDC Valcartier Research Centre.

7. LOCATION OF WORK

Most of the services must be provided on site at the DRDC Valcartier Research Centre, 2459 Route de la Bravoure, Quebec City, QC.

Constraints

Information subject to limited access: The Contractor shall work primarily on site to gain access to required information, material, equipment, hyperspectral sensors and test facilities that are available exclusively at the DRDC Valcartier Research Centre.

ANNEX B

BASIS OF PAYMENT

1. **LABOUR:** at firm rates, inclusive of overhead and of profit, GST/HST extra, in accordance with the following:

TOTAL ESTIMATED LABOUR: \$ _____

Note to bidders:

- c) Bidders should indicate firm rates (inclusive of overhead and of profit) for each category of labour required and for each period.
- d) Bidders should indicate an estimated total number of hours for each category of resource.

If the resource is working under sub-contract, the Bidder should indicate the name of the Subcontractor.

Labour Category	Hourly Firm Rate							Total by category
	Duration of proposed contract							
	Estimated effort for each category	From date of award to March 31 2016	Estimated total number of hours	From April 1 2016 to March 31 2017	Estimated total number of hours	April 1 2017 to March 31 2018	Estimated total number of hours	
a) Project Manager Names :	10%	\$		\$		\$		\$
b) Specialist (physics, optics) Names :	40%	\$		\$		\$		\$
c) Specialist (software, algorithm, computer sciences) Names :	30%	\$		\$		\$		\$
d) Specialist (system engineer, trials	10%	\$		\$		\$		\$

specialist) Names :								
e) Technician (mechanical,ele ctro-optical) Names :	10%	\$		\$		\$		\$

Items 2 through 5 shall be completed if the Bidder's rates in 1. above do not include the following:

2. EQUIPMENT: at laid down cost without markup

Description

(a)

(b)

TOTAL ESTIMATED EQUIPMENT: \$ _____

3. MATERIALS AND SUPPLIES: at laid down cost without markup

Description

(a)

(b)

TOTAL ESTIMATED MATERIALS AND SUPPLIES: \$ _____

4. SUBCONTRACTS: at actual cost without markup

The bidder cannot propose resources in this Section; all resources must be proposed at the Labour Section.

Support for the proposed subcontractor's price is required in the same details as that required for the Bidder's price. The estimated price for subcontracts should include all direct charges and travel & living expenses which would be to the account of the subcontractor.

TOTAL ESTIMATED SUBCONTRACTS: \$ _____

5. TRAVEL & LIVING: at actual cost without markup but not to exceed the limits of the Treasury Board Travel Directive. With respect to the TB Travel Directive, only the meal, private vehicle and incidental allowances specified in Appendices B, C and D of the TB Travel Directive <http://www.tbs-sct.gc.ca/hr-rh/gtla-vgcl/> and the other provisions of the directive referring to "travellers" rather than those referring to "employees", are applicable. *Details are to be provided on a separate sheet.*

Solicitation No – N° de l'invitation
W7701-156004/A
Client Ref No. – N° de réf. du client
W7701-15-6004

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-5-38010

Buyer ID – id de l'acheteur
qcl 038

TOTAL ESTIMATED TRAVEL & LIVING: \$ _____

**TOTAL ESTIMATED COST TO A LIMITATION OF EXPENDITURE: \$ _____
(GST/HST extra)**

With the exception of the firm rate(s) and price(s), the amounts shown in the various items specified above are estimates only. Minor changes to these estimates will be accepted for billing purposes as the Work proceeds, provided that these changes have the prior approval of the Technical Authority, and provided that the estimated cost does not exceed the aforementioned Limitation of Expenditure.

ANNEX C

CONTRACTOR DISCLOSURE OF FOREGROUND INFORMATION

Please refer to **Article 1 - Interpretation of 2040 General Conditions** for the definition of Foreground Information to determine what information must be disclosed.

The Contractor must provide the following information::

1. Contract No.:
2. What is the descriptive title of the FIP (Foreground Intellectual Property)?
3. Abbreviated description of the FIP and, if applicable, of the different systems and sub-systems.
4. What is or was the objective of the project?
5. Explain how the FIP meets the objective of the project (for example: the advantage of the new solution, what problem did the FIP resolve or what benefits did the FIP deliver).
6. Under which category (ies) would you best describe the FIP and why: Patents, Inventions, Trade Secrets, Copyright, Industrial Designs, Rights in Integrated Circuit Topography, Know-how, Other?
7. Describe the features or aspects of the FIP that are novel, useful and not obvious.
8. Has the FIP been tested or demonstrated? If yes, please summarise the results.
9. Has any publication or disclosure to others been made? If so, to whom, when, where and how?
10. Provide names and addresses of the inventors.
11. Provide an explicit and detailed description of the FIP developed during the contract (Refer to pertinent section of the technical report, if necessary).

Please specify name and position of person approving / authorizing this disclosure. This person is to sign and date the disclosure.

Signature _____ Date _____

Name _____ Title _____

(Internal DRDC Valcartier)

Signature _____ Date _____

Name _____ Title (Technical authority) _____

Solicitation No – N° de l'invitation
W7701-156004/A
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W7701-15-6004

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-5-38010

Buyer ID – id de l'acheteur
qcl 038

ANNEX D

SECURITY REQUIREMENTS CHECK LIST

The Security Requirements Check List (SRCL) (Annex **D**) appended to the bid solicitation package is to be inserted at this point and forms part of this document

Solicitation No – N° de l'invitation
W7701-156004/A
Client Ref No. – N° de réf. du client
W7701-15-6004

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-5-38010

Buyer ID – id de l'acheteur
qcl 038

ANNEX E
REQUEST FOR VISIT FORM

The *Request for Visit Form*, which is enclosed, is to be inserted at this point and forms part of this document.



Government of Canada

Gouvernement du Canada

RECEIVED

DEC 23 2014

Contract Number / Numéro du contrat
W7701-156004

Security Classification / Classification de sécurité
unclass

SECURITY REQUIREMENTS CHECK LIST (SRCL)
LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE			
1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine		2. Branch or Directorate / Direction générale ou Direction	
MDN/DND		DRDC Valcartier	
3. a) Subcontract Number / Numéro du contrat de sous-traitance		3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant	
4. Brief Description of Work / Brève description du travail Développement en polarisation LWIR: Modélisation, évaluation de systèmes, soutien technique, gestion des essais			
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?		<input type="checkbox"/> No Non	<input checked="" type="checkbox"/> Yes Oui
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?		<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
6. Indicate the type of access required / Indiquer le type d'accès requis			
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)		<input type="checkbox"/> No Non	<input checked="" type="checkbox"/> Yes Oui
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.		<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
6. c) Is this a commercial courier or delivery requirement with no overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?		<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès			
Canada	<input checked="" type="checkbox"/>	NATO / OTAN	<input type="checkbox"/>
		Foreign / Étranger	<input type="checkbox"/>
7. b) Release restrictions / Restrictions relatives à la diffusion			
No release restrictions Aucune restriction relative à la diffusion	<input checked="" type="checkbox"/>	All NATO countries Tous les pays de l'OTAN	<input type="checkbox"/>
Not releasable À ne pas diffuser	<input type="checkbox"/>		<input type="checkbox"/>
Restricted to: / Limité à: Specify country(ies): / Préciser le(s) pays:	<input type="checkbox"/>	Restricted to: / Limité à: Specify country(ies): / Préciser le(s) pays:	<input type="checkbox"/>
7. c) Level of information / Niveau d'information			
PROTECTED A PROTÉGÉ A	<input checked="" type="checkbox"/>	NATO UNCLASSIFIED NATO NON CLASSIFIÉ	<input type="checkbox"/>
PROTECTED B PROTÉGÉ B	<input type="checkbox"/>	NATO RESTRICTED NATO DIFFUSION RESTREINTE	<input type="checkbox"/>
PROTECTED C PROTÉGÉ C	<input type="checkbox"/>	NATO CONFIDENTIAL NATO CONFIDENTIEL	<input type="checkbox"/>
CONFIDENTIAL CONFIDENTIEL	<input type="checkbox"/>	NATO SECRET NATO SECRET	<input type="checkbox"/>
SECRET SECRET	<input type="checkbox"/>	COSMIC TOP SECRET COSMIC TRÈS SECRET	<input type="checkbox"/>
TOP SECRET TRÈS SECRET	<input type="checkbox"/>		<input type="checkbox"/>
TOP SECRET (SIGINT) TRÈS SECRET (SIGINT)	<input type="checkbox"/>		<input type="checkbox"/>
		PROTECTED A PROTÉGÉ A	<input type="checkbox"/>
		PROTECTED B PROTÉGÉ B	<input type="checkbox"/>
		PROTECTED C PROTÉGÉ C	<input type="checkbox"/>
		CONFIDENTIAL CONFIDENTIEL	<input type="checkbox"/>
		SECRET SECRET	<input type="checkbox"/>
		TOP SECRET TRÈS SECRET	<input type="checkbox"/>
		TOP SECRET (SIGINT) TRÈS SECRET (SIGINT)	<input type="checkbox"/>



PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui

If Yes, indicate the level of sensitivity:
Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? No / Non Yes / Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :
Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

- | | | | |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------|
| <input checked="" type="checkbox"/> RELIABILITY STATUS
COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL
CONFIDENTIEL | <input type="checkbox"/> SECRET
SECRET | <input type="checkbox"/> TOP SECRET
TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET - SIGINT
TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL
NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET
NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET
COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS
ACCÈS AUX EMPLACEMENTS | | | |

Special comments:
Commentaires spéciaux :

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.
REMARQUE: Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work? *work outside operational zone* No / Non Yes / Oui *sm*
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail?
If Yes, will unscreened personnel be escorted? No / Non Yes / Oui
Dans l'affirmative, le personnel en question sera-t-il escorté?

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets?
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? No / Non Yes / Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? No / Non Yes / Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? No / Non Yes / Oui



PART C - (continued) / PARTIE C - (suite)

For users completing the form manually use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire manuellement doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form online (via the Internet), the summary chart is automatically populated by your responses to previous questions. Dans le cas des utilisateurs qui remplissent le formulaire en ligne (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category Catégorie	PROTECTED PROTÉGÉ			CLASSIFIED CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL	SECRET	TOP SECRET	NATO RESTRICTED	NATO CONFIDENTIAL	NATO SECRET	COSMIC TOP SECRET	PROTECTED PROTÉGÉ			CONFIDENTIAL	SECRET	TOP SECRET
											A	B	C			
Information / Assets Renseignements / Biens	<input type="checkbox"/>															
Production	<input type="checkbox"/>															
IT Media / Support TI	<input type="checkbox"/>															
IT Link / Lien électronique	<input type="checkbox"/>															

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?

La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?

La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquer qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).



Government of Canada / Gouvernement du Canada

Contract Number / Numéro du contrat
W7701-156004

Security Classification / Classification de sécurité
Unclass

ANNEXE D / ANNEX D

PART D - AUTHORIZATION / PARTIE D - AUTORISATION			
13. Organization Project Authority / Chargé de projet de l'organisme			
Name (print) - Nom (en lettres moulées) Jean-Marc Thériault		Title - Titre Group leader/ Passive Hyperspectral Threat Detection	Signature
Telephone No. - N° de téléphone 418 844 4000 ext 4793	Facsimile No. - N° de télécopieur 418 844 4511	E-mail address - Adresse courriel jean-marc.theriault@drdc-rddc.gc.ca	Date 16-12-2014
14. Organization Security Authority / Responsable de la sécurité de l'organisme			
Name (print) - Nom (en lettres moulées) Sasa Medjovic - DDSO - Industrial Security Senior Security Analyst Tel: 613-996-0286		E-mail address - Adresse courriel E-mail: sasa.medjovic@rcsc.gc.ca	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date 2014-12-23
15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached? Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?			<input type="checkbox"/> No / Non <input checked="" type="checkbox"/> Yes / Oui
16. Procurement Officer / Agent d'approvisionnement			
Name (print) - Nom (en lettres moulées) Annie Fournier		Title - Titre Spécialiste des approvisionnements	Signature
Telephone No. - N° de téléphone 418-649-2775	Facsimile No. - N° de télécopieur 418-648-2209	E-mail address - Adresse courriel annie.fournier@tpsgc.gc.ca	Date 2015-09-09
17. Contracting Security Authority / Autorité contractante en matière de sécurité			
Name (print) - Nom (en lettres moulées)		Title - Titre	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date Jan. 23, 2015

Maria Mendoza
Contract Security Officer, Contract Security Division
Maria.Mendoza@tpsgc-pwgsc.gc.ca
Tel/Tél - 613-948-1618 / Fax/Télec - 613-954-4171

ANNEX E

The following form must be completed in full. Failure to complete all areas of the form may result in the Request for Visit (RFV), also known as Visit Clearance Request (VCR), being rejected.

Dates must be entered using the following format: yyyy-mm-dd. A RFV may not be longer than one year less a day.

If you require additional space for the number of visitors, do the following:

1. Click on "Particulars of Visitors" on the left hand Bookmarks tab or scroll down to page 4 of the form,
2. Fill in the "Particulars of Visitors" as needed, to a maximum of 7 per page,
3. Print the form,
4. Press "Clear Form", and repeat steps, as required, for a maximum of 80 visitors per RFV.

**Additions to existing visits may be submitted at any time but must be submitted on a separate RFV.

For visits to a foreign entity, you must provide a passport number for all visitors listed.

Any RFV sent by fax or mail must be signed by the Company Security Officer (CSO) or Alternate Company Security Officer (ACSO) in box 10 of the RFV. If you are sending your RFV electronically, the e-mail address of the CSO/ACSO will be accepted as a digital signature in the absence of an actual signature in box 10 of the RFV. However, IISD must be able to identify and confirm the e-mail address from which the RFV was sent. Therefore, the CSO and ACSO contact information in the Industrial Security Program (ISP) database must be up-to-date. If you need to add or update your contact information in the ISP database, please contact the Industrial Security Sector [Call Centre](#).

The request may be submitted by fax to 613-948-1712, by mail to Visits and Document Control, International Industrial Security Directorate (IISD), Industrial Security Sector at our [mailing address](#) or by e-mail to ssivisites.issvisits@tpsgc-pwgsc.gc.ca.

IISD does have a lead time requirement of 15 business days in addition to the lead time requirements of the receiving agency/government department/foreign entity. This lead time is in effect the day the RFV is received by IISD. Thus, please ensure sufficient time is allowed for processing your RFV. Failure to honour these lead times may result in the RFV being rejected. In an emergency, contact us directly to discuss your options. For more information on lead times, please see Annex 6-B in the Industrial Security Manual (ISM), <http://ssi-iss.tpsgc-pwgsc.gc.ca/msi-ism/ch6/annx-6b-eng.html>. IISD cannot provide assurance that a RFV will be processed within the identified lead times if the RFV is sent directly to a Visits Officer.

Should you have any questions regarding the form or instructions, you may contact the Visits and Document Control Division directly via e-mail, ssivisites.issvisits@tpsgc-pwgsc.gc.ca, or the Industrial Security Sector [Call Centre](#).



REQUEST FOR VISIT

All fields **must** be completed:

One -Time
 Recurring
 Emergency
 Addition
 Deletion
 Re-submission

Attachments	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

1. Administrative Data	
Requestor: _____	Date: (yyyy-mm-dd) _____
To: _____	Renewal of Visit No.: _____

2. Requesting Government Organization or Industrial Facility	
Name: _____	
Address: _____ _____	
Fax No.: _____	Telephone No.: _____

3. Government Organization or Industrial Facility to be Visited	
Name: _____	
Address: _____ _____	
Fax No.: _____	Telephone No.: _____
Point of Contact & Section/Branch (mandatory): _____	

<input type="radio"/> Military Site	<input type="radio"/> Not Applicable	<input type="radio"/> Army	<input type="radio"/> Navy	<input type="radio"/> Air Force	<input type="radio"/> DIA
-------------------------------------	--------------------------------------	----------------------------	----------------------------	---------------------------------	---------------------------

4. Dates of Visit (yyyy-mm-dd)	From: _____	To: _____
---------------------------------------	-------------	-----------

5. Type of Visit (select one from each column):	
<input type="radio"/> Government Initiative	<input type="radio"/> Initiated by Requesting Agency of Facility
<input type="radio"/> Commercial Initiative	<input type="radio"/> By Invitation of the Facility to be Visited

6. Subject to be Discussed / Justification / Purpose / Work to be Completed:

7. Anticipated Level of Classified Information to be Involved (mandatory):

8. Is the Visit Pertinent to:	(√)	Specify Contract No. / Project / Program
Specific equipment or a weapons system	<input type="checkbox"/>	
A foreign military sales or export license	<input type="checkbox"/>	
A program or agreement	<input type="checkbox"/>	
A defence acquisition process	<input type="checkbox"/>	
Other	<input type="checkbox"/>	



9. Particulars of Visitors

Name:	_____		
Date of Birth:	_____	Place of Birth:	_____
Security Clearance:	_____	ID/Passport No.:	_____ Nationality: _____
Position:	_____		
Company:	_____		
Name:	_____		
Date of Birth:	_____	Place of Birth:	_____
Security Clearance:	_____	ID/Passport No.:	_____ Nationality: _____
Position:	_____		
Company:	_____		

10. The Security Officer of the Requesting Organization or Industrial Facility

Name: _____ Telephone: _____

Signature: _____

11. For Government Use Only

Name: _____

Address: _____

Telephone: _____

Signature: _____

Stamp

(Optional)

12. Requesting National Security Authority

Name: _____

Address: _____

Telephone: _____

Signature: _____

Stamp

(Optional)

13. Remarks



Government Organization or Industrial Facility to be Visited

1.	Name:	_____		
	Address:	_____		

	Fax No.:	_____	Telephone No.:	_____
	Point of Contact:	_____	Telephone No.:	_____
2.	Name:	_____		
	Address:	_____		

	Fax No.:	_____	Telephone No.:	_____
	Point of Contact:	_____	Telephone No.:	_____
3.	Name:	_____		
	Address:	_____		

	Fax No.:	_____	Telephone No.:	_____
	Point of Contact:	_____	Telephone No.:	_____
4.	Name:	_____		
	Address:	_____		

	Fax No.:	_____	Telephone No.:	_____
	Point of Contact:	_____	Telephone No.:	_____
5.	Name:	_____		
	Address:	_____		

	Fax No.:	_____	Telephone No.:	_____
	Point of Contact:	_____	Telephone No.:	_____
6.	Name:	_____		
	Address:	_____		

	Fax No.:	_____	Telephone No.:	_____
	Point of Contact:	_____	Telephone No.:	_____
7.	Name:	_____		
	Address:	_____		

	Fax No.:	_____	Telephone No.:	_____
	Point of Contact:	_____	Telephone No.:	_____

(Continue as required)



Particulars of Visitors (alphabetical order by surname)

1.	Name:	_____
	Date of Birth:	_____ Place of Birth: _____
	Security Clearance:	_____ ID/Passport No.: _____ Nationality: _____
	Position:	_____
	Company:	_____
2.	Name:	_____
	Date of Birth:	_____ Place of Birth: _____
	Security Clearance:	_____ ID/Passport No.: _____ Nationality: _____
	Position:	_____
	Company:	_____
3.	Name:	_____
	Date of Birth:	_____ Place of Birth: _____
	Security Clearance:	_____ ID/Passport No.: _____ Nationality: _____
	Position:	_____
	Company:	_____
4.	Name:	_____
	Date of Birth:	_____ Place of Birth: _____
	Security Clearance:	_____ ID/Passport No.: _____ Nationality: _____
	Position:	_____
	Company:	_____
5.	Name:	_____
	Date of Birth:	_____ Place of Birth: _____
	Security Clearance:	_____ ID/Passport No.: _____ Nationality: _____
	Position:	_____
	Company:	_____
6.	Name:	_____
	Date of Birth:	_____ Place of Birth: _____
	Security Clearance:	_____ ID/Passport No.: _____ Nationality: _____
	Position:	_____
	Company:	_____
7.	Name:	_____
	Date of Birth:	_____ Place of Birth: _____
	Security Clearance:	_____ ID/Passport No.: _____ Nationality: _____
	Position:	_____
	Company:	_____

(Continue as required)