

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**
**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada**
**1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 1T3
Bid Fax: (902) 496-5016**

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 LAND VEHICLE FLUIDS	
Solicitation No. - N° de l'invitation W7707-135611/B	Date 2012-12-06
Client Reference No. - N° de référence du client W7707-13-5611	
GETS Reference No. - N° de référence de SEAG PW-\$HAL-309-8855	
File No. - N° de dossier HAL-2-69187 (309)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-12-21	Time Zone Fuseau horaire Atlantic Standard Time AST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: MacNeil, Blaine A.	Buyer Id - Id de l'acheteur hal309
Telephone No. - N° de téléphone (902) 496-5180 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE 9 GROVE ST DARTMOUTH Nova Scotia B3A3C5 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

Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 3C9

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

This bid solicitation cancels and supersedes previous bid solicitation number W7707-135611/A dated 2012-10-26 with a closing of 2012-11-14 at 2 p.m.

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Statement of of Requirement

DRDC Atlantic requires the development of theodologies for diagnosis, prognosis and decision-making with respect to the condition of land vehicle fluids.

See details in the Statement of Work attached as Appendix 1.

3. Communications Notification

As a courtesy, the Government of Canada requests that successful bidders notify the Contracting Authority in advance of their intention to make public an announcement related to the award of a contract.

4. Debriefings

After contract award, bidders may request a debriefing on the results of the bid solicitation. Bidders should make the request to the Contracting Authority within 15 working days of receipt of notification that their bid was unsuccessful. The debriefing may be provided 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 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 (2012-07-11) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

2. Submission of Bids

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

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

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

4. Applicable Laws

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

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.

5. Intellectual Property

This requirement has been reviewed in accordance with "Basis for DRDC Ownership of Intellectual Property Arising From DRDC Contracts" form and it has been determined that the Intellectual Property arising from this requirement should rest with the Contractor.

6. Maximum Funding

The maximum funding available for the contract resulting from the bid solicitation is \$60,000. (Goods and Services Tax or the Harmonized Sales Tax 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 (two hard copies)

Section II: Financial Bid (one hard copy)

Section III: Certifications (one hard copy)

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

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

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

Section I: Technical Bid

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.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment in Part 6. The total amount of Goods and Services Tax (GST) or Harmonized Sales Tax (HST) must be shown separately, if applicable.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of

the bid solicitation including the technical and financial evaluation criteria.

- (b) An evaluation team composed of representatives of Canada will evaluate the bids.
- (c) The evaluation team will determine first if there are three (3) or more bids with a valid Canadian Content certification. In that event, the evaluation process will be limited to the bids with the certification; otherwise, all bids will be evaluated. If some of the bids with a valid certification are declared non-responsive, or are withdrawn, and less than three responsive bids with a valid certification remain, the evaluation will continue among those bids with a valid certification. If all bids with a valid certification are subsequently declared non-responsive, or are withdrawn, then all the other bids received will be evaluated.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

Refer to Appendix 2 Evaluation Criteria.

1.1.2 Point Rated Technical Criteria

Refer to Appendix 2 Evaluation Criteria

1.2 Financial Evaluation

The price of the bid will be evaluated in Canadian dollars, the Goods and Services Tax or the Harmonized Sales Tax excluded, FOB destination, Canadian customs duties and excise taxes included.

2. Basis of Selection

2.1 Basis of Selection - Highest Rated Within Budget

To be declared responsive, a bid must:

- (a) comply with all the requirements of the bid solicitation;
- (b) meet all mandatory technical evaluation criteria;
- (c) obtain the required minimum points for each group of criteria with a pass mark; and
- (d) obtain the required minimum points overall for the technical evaluation criteria which are subject to point rating.

Bids not meeting (a) or (b) or (c) or (d) will be declared non responsive. The responsive bid with the highest number of points will be recommended for award of a contract, provided that the total evaluated price does not exceed the budget available for this requirement. In the event that the highest number of points is obtained by more than one responsive bid, the responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

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

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

1. Certifications Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

1.1. Code of Conduct Certifications - Certifications Required Precedent to Contract Award

Bidders should provide, with their bids or promptly thereafter, a complete list of names of all individuals who are currently directors of the Bidder. If such a list has not been received by the time the evaluation of bids is completed, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Bidders must submit the list of directors before contract award, failure to provide such a list within the required time frame will render the bid non-responsive.

The Contracting Authority may, at any time, request that a Bidder provide properly completed and Signed Consent Forms (Consent to a Criminal Record Verification form -PWGSC-TPSGC 229) for any or all individuals named in the aforementioned list within a specified delay. Failure to provide such Consent Forms within the delay will result in the bid being declared non-responsive.

1.2 Federal Contractors Program

Suppliers who are subject to the Federal Contractors Program (FCP) and have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive federal government contracts over the threshold for solicitation of bids as set out in the Government Contracts Regulations. Suppliers may be declared ineligible contractors either as a result of a finding of non-compliance by HRSDC, or following their voluntary withdrawal from the FCP for a reason other than the reduction of their workforce to less than 100 employees. Any bids from ineligible contractors, including a bid from a joint venture that has a member who is an ineligible contractor, will be declared non-responsive.

The Bidder, or, if the Bidder is a joint venture the member of the joint venture, certifies its status with the FCP, as follows:

The Bidder or the member of the joint venture

() is not subject to the FCP, having a workforce of less than 100 full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada;

() is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c. 44;

() is subject to the requirements of the FCP, having a workforce of 100 or more full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC, having not bid on requirements of \$200,000 or more;

() has not been declared an ineligible contractor by HRSDC, and has a valid certificate number as follows: _____ .

Further information on the FCP is available on the HRSDC Web site.

1.3 Former Public Servant Certification

Contracts with 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 with FPS, bidders must provide the information required below.

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:

- an individual;
- an individual who has incorporated;
- a partnership made of former public servants; or
- 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, in the context of the fee abatement formula, 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 to the Canada Pension Plan Act, R.S., 1985, c. C-8.

Former Public Servant in Receipt of a Pension

Is the Bidder a FPS in receipt of a pension as defined above? Yes () No ()

If so, the Bidder must provide the following information:

name of former public servant;
date of termination of employment or retirement from the Public Service.

A contract for the services of a FPS who has been retired for less than one year and who is in receipt of a pension as defined above is subject to a fee reduction (abatement formula) as required by Treasury Board Policy.

Work Force Reduction Program

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of a work force reduction program? Yes () No ()

If so, the Bidder must provide the following information:

name of former public servant;
conditions of the lump sum payment incentive;
date of termination of employment;
amount of lump sum payment;
rate of pay on which lump sum payment is based;
period of lump sum payment including start date, end date and number of weeks;
number and amount (professional fees) of other contracts subject to the restrictions of a work force reduction 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 the Goods and Services Tax or Harmonized Sales Tax.

Certification

By submitting a bid, the Bidder certifies that the information submitted by the Bidder in response to the above requirements is accurate and complete.

1.4 Définition du contenu canadien

SACC Manual Clause A3050T (2010-01-11)

Instructions aux soumissionnaires/entrepreneurs

1.5 Education and Experience

SACC Manual Clause A3010T Education and Experience (2010-08-16)

1.6 Status and Availability of Resources

SACC Manual Clause A3005T Status and Availability of Resources (2010-08-16)

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There are no security provisions associated with the requirement.

2. Requirement

The Contractor must complete the Work in accordance with the Requirement at Annex A and the Contractor's technical bid entitled _____ dated _____.

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual issued by Public Works and Government Services Canada.

3.1 General Conditions

2040 (2012-07-16), General Conditions - Research & Development apply to and form part of the Contract.

4. Delivery

Phase One Start Date: Upon contract award

Phase One Draft Report: 28 February 2013

Phase One Final Report: 15 March 2013

Phase two will commence upon satisfactory completion, as determined by the Project Authority ofPhase one and confirmation of available funding.

Optional Phase Two Start Date: Upon satisfactory completion of Phase One, as determined by the Project Authority, and with confirmation fo available funding, approval will be given to commence phase two of the contract.

Phase Two Draft Report: 28 February 2014

Phase Two Final Report: 15 March 2014

Contract Completion: 31 March 2014

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Blaine MacNeil

Title: Supply Officer

Public Works and Government Services Canada

Acquisitions Branch

Telephone: 902-496-5180

Facsimile: 902-496-5117

E-mail address: blaine.macneil@pwgsc.gc.ca

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

5.2 Technical Authority:

The Project Authority for the Contract is: (to be named upon contract award)

Name:

Organization:

Telephone:

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

5.3 Contractor's Representative

Name:

Company:

Telephone:

Facsimile:

E-mail address:

6. Payment

6.1 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 \$60,000.00. Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

6.2 Limitation of Expenditure

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 to a limitation of expenditure of \$60,000.00. Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

6.3 Method of Payment

6.3.1 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>) 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.

6.4 SACC Manual Clauses

C0305C Cost Submission (2008-05-12)

7. Invoicing Instructions

7.1 Invoicing Instructions - Progress Claim

- 7.1.1 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>).

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

(c) a list of all expenses

8. Certifications

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

9. Applicable Laws

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

10. Priority of Documents

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

- (a) the Articles of Agreement;
- (b) 2040 General Conditions - Research & Development (2012-07-16);
- (c) Annex A, Requirement;
- (d) the Contractor's bid dated _____ (insert date of bid)

11. SACC Manual Clauses

A9116C T1204 - Direct Request by Customer Department (2007-11-30)
C0705C Discretionary Audit (2010-01-11)

ANNEX A

Title

Development of a Health Monitoring Methodology for Land Vehicle Oils

Requirement

To develop a health monitoring algorithm with the ability to monitor oil continuously, in "real time"..

See attached Statement of Work, Appendix 1.

Security:

All work is unclassified and the contractor will not have access to any classified information. No access to DRDC or DND facilities is required.

Intellectual Property

Any IP generated will lie with the contractor.

Controlled Goods

The contractor will not require access to controlled goods.

The work performed under this contract is DMC-A.

Time Schedule

It is requested that the contract be awarded in 2 phases.

Phase One Start Date: Upon contract award

Phase One Final Report: 31 March 2013

Phase Two will commence upon satisfactory completion, as determined by the Project Authority of Phase One and confirmation of availability of funding. At any time before commencing Phase Two, the Crown retains the right not to proceed to Phase Two and to terminate the contract at its discretion.

Phase Two Start Date: Upon satisfactory completion of Phase One, as determined by the Scientific Authority, and with confirmation of available funding, approval will be given to commence Phase Two of the contract

Phase Two Draft Report: 28 February 2014

Phase Two Final Report: 15 March 2014

Contract Completion: 31 March 2014

Deliverables

In addition to the return of all non-expended items (equipment, software, books, etc.) acquired by the contractor in support of this requirement and claimed for against the contract, the deliverables shall be:

Phase One:

- Any code, executable program/file, mathematical equations, calculations etc., written in support of this work

- Results of any calculations performed in electronic format (in a non-proprietary file format)
- Bi-monthly (every 2 months) progress reports in an informal format such as email or telephone call.
- A final report detailing all work carried out by the contractor under this contract in Phase One (see attached Appendix A: Statement of Work for specifics).
- A detailed work plan for Phase Two

Phase Two:

- Any code, executable program/file, mathematical equations, calculations etc., written in support of this work
- Results of any calculations performed in electronic format (in a non-proprietary file format)
- Bi-monthly (every 2 months) progress reports in an informal format such as email or telephone call.
- A final report (draft to be submitted no later than 28 Feb, 2014) detailing all work carried out by the contractor under this contract in Phase Two (see attached Appendix A: Statement of Work for specifics).

Reports

As directed by the Project Authority, DRDC Atlantic requires an electronic copy of final Contract Report.

Report Standard and Format

Reports will be to a standard acceptable to the Project Authority. Should a report not be in accordance with the requirement of the work, the Project Authority shall have the right to reject it or require its correction.

The Project Authority will provide the Contractor with a CD that contains: 1) a MSWord template of a Contract Report, 2) a PDF file of a sample Contract Report, and 3) a PDF file of the "Requirements for DRDC Atlantic Contractor Reports". The contractor is responsible for delivering a draft copy of the Contract Report to the Project Authority for review. This review may require the contractor to make changes as directed by the Project Authority. Also, this review will help to ensure the report is in keeping with contract requirements and that DND interests, including security, are safeguarded. The final report format shall comply with the standards set out in the DRDC Atlantic guide "Requirements for DRDC Atlantic Contractor Reports".

Financial Limitations

The maximum funding available for each Phase of this contract is: (Excluding HST)

Phase One	FY12/13	\$30,000
Phase Two	FY13/14	\$30,000

Total expenditure is not to exceed \$60,000 CAD (not including HST). Funding for Phase Two of the project is contingent upon successful completion of Phase One, and availability of funds as determined by the Project Authority.

Basis of Payment

Progress Payments

Travel and Living

None.

Basis of Selection

It is requested that Contractor selection be on the basis of highest technical proposal within the stated budget. Suggested Evaluation Criteria attached as Appendix B.

Contractor Personnel

All contractor personnel shall be named in the contract. All proposed changes in contractor personnel shall be addressed by the contractor to Public Works and Government Services Canada who in turn will request DRDC Atlantic's approval.

Government Furnished Equipment (GFE)

No government equipment will be made available to the contractor.

DRDC Atlantic Support, Facilities and Responsibilities

No DRDC Atlantic support, facilities or responsibilities are anticipated.

Policy for Connecting Non-DND Computers to DRDC Atlantic Networks

No non-DND computers will be connected to the DRDC Atlantic networks.

Control Procedures

Inspection shall be by and to the satisfaction of the Director General, Defence R&D Canada - Atlantic

Progress will be monitored through regular consultations between the contractor and the Project Authority. The work shall be deemed 100% complete upon receipt and approval of the draft final report by the Project Authority. The contractor must allow time for editorial review of the draft report by the Project Authority and agree to make minor editorial changes to the report, to print the report, and to deliver the report, at no additional cost. Upon receipt of all bound copies of the Final Report and other deliverables, and upon receipt of a Claim for Holdback, the holdback will be released

Invoicing Address

Invoices/Progress Claims shall be mailed to:

Defence R&D Canada - Atlantic
P.O. Box 1012
Dartmouth, Nova Scotia
B2Y 3Z7

Attention: Corporate Services Secretary

Approval Prior To Publication

All manuscripts for publication in scientific journals or the like, abstracts of oral presentations and any releases that describe portions of the contract work or related information shall be submitted to the Project Authority for approval of release. If the inadvertent presence of either defence classified or proprietary material is determined, the Project Authority will consult with the contractor to redraft the relevant sections to their joint satisfaction to produce an unclassified text or theme without sensitive information. Review of manuscripts and releases will be completed within two months after receipt. Review of abstracts and any other releases will proceed rapidly and approval of release will follow without delay.

Solicitation No. - N° de l'invitation

W7707-135611/B

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

hal309

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

W7707-13-5611

File No. - N° du dossier

HAL-2-69187

CCC No./N° CCC - FMS No/ N° VME

ANNEX B**BASIS OF PAYMENT**

1. **LABOUR:** at the following firm rates

CATEGORY (OR NAME)**FIRM HOURLY RATE**

\$ _____
\$ _____

Est.: \$ _____

2. **EQUIPMENT:** at laid down cost without markup

Est.: \$ _____

3. **RENTALS:** at actual cost without markup

Est.: \$ _____

4. **MATERIALS AND SUPPLIES:** at laid down cost without markup

Est.: \$ _____

5. **TRAVEL AND LIVING EXPENSES:**

Est.: \$ _____

The Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the Treasury Board Travel Directive (http://www.tbs-sct.gc.ca/pubs_pol/hrpubs/TBM_113/td-dv_e.asp), and with the other provisions of the directive referring to "travellers", rather than those referring to "employees" are applicable.

All travel must have prior authorization of the Technical Authority Project Authority. All payments are subject to government audit.

6. **SUBCONTRACTS:** at actual cost without markup

Est.: \$ _____

7. **OTHER DIRECT CHARGES:** at actual cost without markup

Est.: \$ _____

8. **OVERHEAD:** at a firm rate of ____% of item ____ above

Est.: \$ _____

9. **PROFIT:** at a firm rate of ____% of item ____ above

Est.: \$ _____

Solicitation No. - N° de l'invitation

W7707-135611/B

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

hal309

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

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

W7707-13-5611

HAL-2-69187

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 Project Authority and provided that the estimated cost does not exceed the aforementioned Limitation of Expenditure

Appendix 1: Statement of Work

Development of a Health Monitoring Methodology for Land Vehicle Oils

Scope:

This contract is for the development of a health monitoring (HM) methodology to monitor land vehicle oils. It may use methods such as, but not limited to, nonlinear diagnostics, interactive multiple models, neural network prognosis algorithms, case-based reasoning and decision-support.

Objective:

In the context of land vehicle oils, the aim of this work is to:

1. Develop an algorithm for health monitoring using data based on vehicle models ;Show the utility of health monitoring for condition based maintenance.

Background:

Condition based maintenance (CBM) represents a shift in system maintenance, centered on predictive scheduling of maintenance actions by estimation and prediction of a system's health state. CBM brings unprecedented operational benefits in safety, mission planning, and maintenance cost/down-time by preventing service interruptions/failures. Reliable CBM is imperative in military land vehicles that operate in harsh environments 24/7. CBM can be broken down into three steps: data acquisition, data processing, and decision making. While data acquisition is an important aspect of CBM, there are a number of commercial enterprises already manufacturing sensors to monitor vehicle fluids. The areas of CBM that are more challenging are those of data processing, and decision making.

Requirement:

This Statement of Work describes in general terms the tasks that are to be carried out under the contract. It is expected that proposals will include:

- Sufficient discussion of the relevant literature to demonstrate an understanding of health monitoring methodologies for land vehicles.
- A detailed work plan for Phase One, with options for Phase Two identified.

The requirements for this contract are split into two Phases. Phase One will occur in FY12/13, Phases Two will be in FY13/14. Outlined below are the scopes for each Phase, as well as the deliverables required.

Phase One:

The objective of phase one is to identify the appropriate methodology required for health monitoring of the condition of land vehicle oils.

The contractor shall perform the following:

- 1) Identify an appropriate data simulation model, such as Diesel-rk, Dspace, Ringpak or MVEM. Identify and critically evaluate a potential health monitoring methodology. The performance criteria shall include sensitivity to faults/degradation, fault detection time, capability to identify incipient trends/degradation and capacity to isolate different oil quality indices.

Deliverables:

- Any code, executable program/file, mathematical equations, calculations, algorithms etc., written in support of this work
- Results of calculations in electronic format (in a non-proprietary file format)
- Bi-monthly (every 2 months) progress reports in an informal format such as email or telephone call.
- A final report (draft to be submitted no later than 28 Feb, 2013) detailing all work carried out by the contractor under this contract in Phase One.
- A detailed work plan for Phase Two

Phase Two:

The objective of phase two is to develop an algorithm, using the methodology identified in Phase One, which can perform health monitoring for land vehicle oils. The parameters of interest include, but are not limited to: viscosity, dielectric constant, temperature, particulate.

2) The contractor shall perform the following: Develop a health monitoring algorithm with the ability to monitor oil continuously, in "real time".

Deliverables:

- Any code, executable program/file, mathematical equations, calculations, algorithms etc. written in support of this work
 - Results of calculations in electronic format (in a non-proprietary file format)
 - Bi-monthly (every 2 months) progress reports in an informal format such as email or telephone call.
 - A final report (draft to be submitted no later than 28 Feb, 2014) detailing all work carried out by the contractor under this contract in Phase Two
- Append

Appendix 2

Evaluation Criteria

Technical/Management proposals will be evaluated in accordance with the following **POINT RATED CRITERIA**. It is suggested bidders address these **POINT RATED CRITERIA** in sufficient depth in their proposal.

It is expected that proposals will include:

- Sufficient discussion of the relevant literature to demonstrate an understanding of diagnostic, prognostic and health monitoring methodologies for land vehicles.
- A detailed work plan for Phase One, with options for Phase Two identified.

TECHNICAL PROPOSAL **100 POINTS MAX / 70 POINTS MINIMUM**

- | | |
|---|-----------|
| (a) Demonstrated understanding of scope and objectives | 40 POINTS |
| (b) Proposed work feasibility, approach and methodology | 30 POINTS |
| (c) Recognition of direct as well as peripheral problems and solutions proposed | 10 POINTS |
| (d) Adequacy of level of effort, workplan and schedule, deliverables | 20 POINTS |

MANAGEMENT PROPOSAL **100 POINTS MAX / 70 POINTS MINIMUM**

(a) proposed management of the project and the demonstrated qualifications and experience of the project manager, including: position within the organization, relevant experience, education, etc.; demonstrated ability to control costs.

20 POINTS

(b) key personnel capability – demonstrated relevant experience, qualifications and competence proven by similar and/or related work in fuels and lubricants quality analysis. Experience in diagnostic, prognostic and health monitoring systems.

40 POINTS

(c) company capability including subcontractors, if applicable – relevant experience/competence proven by similar or related work in fuels and lubricants quality analysis. Experience in diagnostic, prognostic and health monitoring systems.

20 POINTS

(d) adequacy of planned team organization, including availability of team members and backup capability, reporting structure, management of project, subcontracts and capability to carry out the project within the time frame allotted.

20 POINTS