| RETURN BIDS TO: <br> RETOURNER LES SOUMISSIONS À: | Title - Titre <br> Determination of Polycyclic Aromatic Compounds in Lake Sediments |  |
| :---: | :---: | :---: |
| Bid Receiving - Environment Canada / Réception des soumissions Environnement Canada | EC Bid Solicitation No. /SAP No. - № de la demande de soumissions EC / № SAP <br> 5000018481 |  |
| 867 Lakeshore Road Burlington, Ontario L7S 1A1 | Date of Bid solicitation (YYYY-MM-DD) - Date de la demande de soumissions (AAAA-MM-JJ)2015-12-11 |  |
| BID SOLICITATION demande de soumissons <br> PROPOSAL TO: ENVIRONMENT CANADA | Bid Solicitation Closes (YEAR-MM-DD) - La demande de soumissions prend fin (AAAA-MM-JJ) <br> at - à 2:00 P.M. on - le 2015-12-30 | Time Zone - Fuseau horaire <br> Eastern Standard Time (EST) |
| We offer to perform or provide to Canada the services detailed in the | $\begin{aligned} & \hline \text { F.O.B - F.A.B } \\ & \text { Not Applicable } \end{aligned}$ |  |
| document including any attachments and annexes, in accordance with the terms and conditions set out or referred | Address Enquiries to - Adresser toutes questions à Heidi Noble <br> Heidi.Noble@canada.ca |  |
| to in the document, at the price(s) provided. | Telephone No. - № de téléphone Fax No. - № de Fax <br> $905-319-6982$ $905-336-8907$ |  |
| SOUMISSION À: <br> ENVIRONNEMENT CANADA | $\begin{aligned} & \hline \hline \text { Delivery Required (YEAR-MM-DD) - Livraison exigée (AAAA- } \\ & \text { MM-JJ) } \\ & \text { 2017-03-31 } \\ & \hline \end{aligned}$ |  |
| Nous offrons d'effectuer ou de fournir au Canada, aux conditions énoncées | Destination - of Services / Destination des services Ontario Region |  |
| document incluant toutes pièces jointes et annexes, les services détaillés dans | Security / Sécurité <br> There is no security requirement associated with this solicitation. |  |
|  | Vendor/Firm Name and Address - Raison sociale et adresse du fournisseur/de l'entrepreneur |  |
|  | Telephone No. - $\mathbf{N}^{\circ}$ de téléphone | Fax No. - ${ }^{\circ}$ de Fax |
|  | Name and title of person authorized to sign on behalf of Vendor/Firm: (type or print) / <br> Nom et titre de la personne autorisée à signer au nom du fournisseur/de l'entrepreneur (taper ou écrire en caractères d'imprimerie) <br> Signature <br> Date |  |
|  |  |  |

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## PART 1 - GENERAL INFORMATION

## 1. Security Requirement

1.1 There is no security requirement associated with this requirement.

## 2. Statement of Work

The Work to be performed is detailed under Annex A, Statement of Work of the resulting contract.

## 3. Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days 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 PWGSC 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.

The standard instructions 2003 are modified as follows:

## Under "Text" at 02:

Delete: "Procurement Business Number"
Insert: "Deleted"

## At Section 02 Procurement Business Number

Delete: In its entirety
Insert: "Deleted"
At Section 05 Submission of Bids, Subsection 05 (2d):
Delete: In its entirety
Insert: "send its bid only to Environment Canada (EC) as specified on page 1 of the bid solicitation or to the address specified in the bid solicitation;"

## At Section 06 Late Bids:

Delete: "PWGSC"
Insert: "Environment Canada"

## At Section 07 Delayed Bids:

Delete: "PWGSC"
Insert: "Environment Canada"
At Section 08 Transmission by Facsimile, Subsection 08 (1):
Delete: In its entirety
Insert: "Bids may be submitted by facsimile if specified in the bid solicitation."
At Section 12 Rejection of Bid, Subsection 12 (1) a. and b.:
Delete: In their entirety
Insert: "Deleted"
At Section 17 Joint Venture, Subsection 17 (1) b.:
Delete: "the Procurement Business Number of each member of the joint venture,"

## Insert: "Deleted"

At Section 20 Further Information, Subsection 20 (2):<br>Delete: In its entirety<br>Insert: "Deleted"<br>At Section 05 Submission of Bids, Subsection 05 (4)<br>Delete: "sixty (60) days"<br>Insert: "one hundred and twenty (120) days"

## 2. Submission of Bids

Bids must be submitted to Environment Canada (EC) at the address and by the date, time and place indicated on page 1 of the bid solicitation.

## 3. Former Public Servant - Competitive Bid

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:
a. an individual;
b. an individual who has incorporated;
c. a partnership made of former public servants; or
d. 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:
a. name of former public servant;
b. 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:
a. name of former public servant;
b. conditions of the lump sum payment incentive;
c. date of termination of employment;
d. amount of lump sum payment;
e. rate of pay on which lump sum payment is based;
f. period of lump sum payment including start date, end date and number of weeks;
g. 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. 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 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 Ontario.

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

## PART 3 - BID PREPARATION INSTRUCTIONS

## 1. Bid Preparation Instructions

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

| Section I: | Technical Bid - two (2) hard copies |
| :--- | :--- |
| Section II: | Financial Bid - two (2) hard copy |
| Section III: | Certifications - two (2) hard copies |

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 $8.5 \times 11$ inch ( $216 \mathrm{~mm} \times 279 \mathrm{~mm}$ ) paper;
(b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policyeng.html). To assist Canada in reaching its objectives, bidders should:

1) use $8.5 \times 11$ inch ( $216 \mathrm{~mm} \times 279 \mathrm{~mm}$ ) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum $30 \%$ recycled content; and
2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders; and
(3) print on both sides of the paper.

## 2. 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 carry out the Work

## 3. Section II: Financial Bid

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

### 3.2 Price Breakdown

In their financial bid, the bidders are requested to provide a detailed breakdown of the price for the following elements for each milestone of the Work, as applicable:
(a) Professional fees: For each individual and (or) labour category to be assigned to the Work, the bidders should indicate: i) the firm hourly rate or the firm daily rate, inclusive of overhead and profit; and ii) the estimated number of hours or days, as applicable. The bidders should indicate the number of hours in one working day.
(b) Equipment (if applicable): Delete
(c) Materials and Supplies (if applicable): Delete
(d) Travel and Living Expenses (if applicable): Delete
(e) Subcontracts (if applicable): The bidders should identify all of the proposed subcontractors and provide in their financial bid for each one a price breakdown.
(f) Other Direct Charges (if applicable): The bidders should identify all of the categories of other direct charges anticipated, such as long distance communications and rentals, providing the pricing basis for each and explaining the relevance to the work described in the resultant contract in part 6 of the bid solicitation.
(g) Applicable Taxes: The bidders should indicate the Applicable Taxes separately.
3.3 Bidders should include the following information in their financial bid:
(a) Their legal name; and
(b) The name of the contact person (including this person's mailing address, phone and facsimile numbers and email address) authorized by the Bidder to enter into communications with Canada with regards to their bid; and any contract that may result from their bid.

## 4. Section III-Certifications

### 4.1 Certifications Required Precedent to Contract Award

Bidders must provide the required certifications Part 5.

## PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

### 1.1 Evaluation Procedures

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

### 1.2 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.

### 1.2.1 Mandatory Technical Criteria

The laboratory must accredited by the Canadian Association for Laboratory Accreditation (CALA). Environment Canada reserves the right to verify certification prior to contract award.

Evidence of at least one previous contract for analysis of PACs and alkylated PACs under the Joint Oil Sands Monitoring Program

### 1.2.2 Point Rated Technical Criteria

To be considered responsive, a bidder must obtain the required minimum of $49 / 70$ of the overall points for the Point Rated technical evaluation criteria

| 1 | Detailed standard operating procedure for the entire method is provided including a list of analytes which meets or exceeds the list in Attachment I. Analysis of unsubstituted PACs must be conducted according to accredited (CALA) Standard Operating Procedures <br> a) Proposal clearly identifies a detailed standard operating procedure with accredited SOPs and list of requested analytes (10 pts) <br> b) Proposal identifies a detailed standard operating procedure with accredited SOPs but is missing some details ( 7 pts ) <br> c) Proposal identifies a detailed standard operating procedure with accredited SOPs but is missing many details (4 pts) <br> d) Proposal does not present standard operating procedures ( 0 pts ) | 10 |
| :---: | :---: | :---: |
| 2 | Analytical methodology conforms to EC requirements for sediments from the JOSMP (outlined in Statement of Work) including Soxhlet or pressurized fluid extraction, fractionation of the extract via solid phase chromatography on silica, additional cleanup by GPC if required; Gas chromatography-Mass spectrometry (GC-MS) methods that employ multiple ion monitoring and the isotope dilution method of quantification <br> a. Proposal clearly identifies that the analytical methodology conforms to the specified EC requirements as required in the Statement of Work (10 pts) <br> b. Proposal identifies that the analytical methodology conforms to the specified EC requirements as required in the Statement of Work, but is missing some details ( 7 pts ) <br> c. Proposal identifies that the analytical methodology conforms to the specified EC requirements as required in the Statement of Work, but is missing many details (4 points) <br> d. Proposal does not present details on how the analytical methodology conforms to EC requirements (0 points) | 10 |
| 3 | Must be able to demonstrate low level Sample Specific Detection Limits for each analyte. This must include evidence from analysis of actual sediments or from blanks and low level standards, that the laboratory is able to achieve these detection limits. <br> a. Proposal clearly identifies the Sample Specific detection limits for each analyte based on analysis of actual sediments or from blanks and low level standards (10 pts) <br> b. Proposal identifies the detection limits for each analyte based on analysis of actual sediments or from blanks and low level standards, but is missing some details ( 7 pts ) | 10 |


|  | c. Proposal identifies the detection limits for each analyte based on analysis of actual sediments or from blanks and low level standards, but is missing many details ( 4 pts ) <br> d. Proposal does not present details the detection limits for each analyte based on analysis of actual sediments or from blanks and low level standards (0 points) |  |
| :---: | :---: | :---: |
| 4 | Must provide evidence that the laboratory will meet or exceed the following Quality assurance criteria outlined in the statement of work <br> 1. Use of recovery standards in each sample and a performance standard to check sample volumes and instrument performance <br> 2. The analysis must include at least 1 blank (encompassing all reagents and all steps in the procedure from extraction through vialing of cleaned up sample extracts) for every 20 samples. <br> 3. The analysis must include analysis of at least one certified reference sediment every 20 samples. <br> 4. One duplicate sample analysis should be analysed every 20 samples <br> 5. Analytes must be quantified using working standards and deuteratedsurrogates from certified external standards whose source and batch can be documented. <br> a. Proposal clearly identifies quality assurance criteria 1 through 5 ( 15 pts ) <br> b. Proposal identifies partly identifies quality assurance criteria 1 through 5 (10 pts) <br> c. Proposal identifies quality assurance criteria but is missing many details (5 pts) <br> d. Proposal does not present details of quality assurance criteria (0 pts) | 15 |
| 5 | Evidence of previous work for government or private industry on PACs and alkylated PACs in sediments <br> a. The proposal clearly provides evidence of previous work for government or private industry on PACs and alkylated PACs in sediments ( 7.5 pts ) <br> b. The proposal provides evidence of previous work for government or private industry on PACs and alkylated PACs in sediments but is missing some details (5 pts) <br> c. The proposal provides provides evidence of previous work for government or private industry on PACs and alkylated PACs in sediments but is missing many details ( 3.5 pts ) <br> d. Proposal does not provide evidence of previous work for government or private industry on PACs and alkylated PACs in sediments ( 0 pts) | 7.5 |
| 6 | Evidence that the laboratory will provide results for all 75 parameters (20 unsubstituted PACs, 28 alkylated PAC groups, and 26 individual alkylated PACs) including a detailed description of the calibration and quantification procedure <br> a. The proposal clearly provides evidence of results for all 75 parameters including a description of the calibration and quantification ( 7.5 pts ) <br> b. The proposal provides evidence of results for all 75 parameters including a description of the calibration and quantification but is missing some details ( 5 pts ) <br> c. The proposal provides provides evidence of results for all 75 parameters including a description of the calibration and quantification but is missing many details ( 3.5 pts ) <br> d. Proposal does not provide evidence of results for all 75 parameters including a description of the calibration and quantification ( 0 pts ) | 7.5 |
| 6 | Evidence of successful participation in interlaboratory quality assurance programs on PACs - to include results for PACs and alkylated PACs and comparison with concensus values from the programs | 10 |


|  | a. The proposal clearly provides evidence of participation in interlaboratory <br> quality assurance programs including both PACs and alkylated PACs as well <br> as previous successful projects on the analysis of PACs in sediments (10 pts) <br> b. The proposal provides evidence of participation in interlaboratory quality <br> assurance programs including both PACs and alkylated PACs as well as <br> previous successful projects on the analysis of PACs in sediments but is <br> missing some details (7 pts) <br> c. The proposal provides provides evidence of participation in interlaboratory <br> quality assurance programs including both PACs and alkylated PACs as well <br> as previous successful projects on the analysis of PACs in sediments but is <br> missing many details (4 pts) <br> d. Proposal does not provide evidence of participation in interlaboratory quality <br> assurance programs including both PACs and alkylated PACs or previous <br> successful projects on the analysis of PACs in sediments (0 pts) |  |
| :--- | :--- | :--- |
| Total | Minimum points required: 49 | 70 |

### 1.3 Financial Evaluation

### 1.3.1 Mandatory Financial Criteria

Bids must meet the mandatory financial criteria specified in the table inserted below.
Bids which fail to meet the mandatory financial criteria will be declared non-responsive. Each criterion should be addressed separately.

The maximum budget allocated for this project shall not exceed $\$ 55,000.00$ (HST extra), (including all labour, associated costs, and subcontractors). Bids valued in excess of this amount will be considered non-responsive. This disclosure of project funds does not commit Environment Canada to pay such an amount.

### 1.3.2 Evaluation of Price

Proposals will be evaluated out of 30 points
The proposal with the lowest price receives the maximum 30 points, and all higher priced proposals will be pro-rated relative to the lowest price.

A minimum score of $70 \%$ must be obtained for the proposal to be considered responsive.

## 2. Basis of Selection

## Highest Combined Rating of Technical Merit and Price

1. To be declared responsive, a bid must:
(a) comply with all the requirements of the bid solicitation;
(b) meet all mandatory financial criteria; and
(c) obtain the required minimum of 49 points overall for the technical evaluation criteria which are subject to point rating.
2. Bids not meeting (a) or (b) or (c) will be declared non-responsive.
3. The evaluation will be based on the highest responsive combined rating of technical merit and price. 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 price 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 equals 100 and the lowest evaluated price is $\$ 45,000$ (45).

Basis of Selection - Highest Combined Rating Technical Merit (70\%) and Price (30\%)

## Bidder

|  | Bidder 1 | Bidder 2 | Bidder 3 |
| :---: | :---: | :---: | :---: |
| Overall Technical Score | 85/100 | 66/100 | 68/100 |
| Bid Evaluated Price | \$55,000.00 | \$50,000.00 | \$45,000.00 |
| Calculations |  |  |  |
| Technical Merit Score | $85 / 100 \times 70=59.5$ | $66 / 100 \times 70=46.2$ | $68 / 100 \times 70=47.6$ |
| Pricing Score | $45 / 55 \times 30=24.55$ | $45 / 50 \times 30=27$ | $45 / 45 \times 30=30$ |
| Combined Rating | $\underline{84.05}$ | 73.2 | 77.6 |
| Overall Rating | 1st | 3rd | $\underline{2^{\text {nd }}}$ |

## PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated 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 in carrying out any of its obligations under the Contract, 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 may render the bid non-responsive or constitute a default under the Contract.

## 1. Certifications Required Precedent to Contract Award

### 1.1 Integrity Provisions - Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions 2003. The associated
information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

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

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

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

## 2. Additional Certifications Required 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 inform the Bidder of a time frame within which to provide the information. Failure to comply with the request of the Contracting Authority and to provide the certifications within the time frame provided will render the bid non-responsive.

### 2.1 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.

### 2.2 Education and Experience

SACC Manual clause A3010T (2010-08-16) Education and Experience
The Bidder certifies that all the information provided in therésumés 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.

## PART 6 - RESULTING CONTRACT (at contract award, delete this line)

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation (at contract award, delete this sentence and insert the title).

Title: (insert title at contract award)

## 1. Security Requirement

1.1 There is no security requirement applicable to this Contract.

## 2. Statement of Work

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

## 3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the PWGSC 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.

### 3.1 General Conditions

2010B (2015-09-03) General Conditions - Professional Services (Medium Complexity), as modified below, apply to and form part of the Contract.

General conditions 2010B is modified as follows:

## At Section 12 Transportation Costs

Delete: In its entirety
Insert: "Deleted"

## At Section 13 Transportation Carriers" Liability

Delete: In its entirety.
Insert: "Deleted"

## At Section 18, Confidentiality:

Delete: In its entirety
Insert: "Deleted"
Insert Subsection: "35 Liability"
"The Contractor is liable for any damage caused by the Contractor, its employees, subcontractors, or agents to Canada or any third party. Canada is liable for any damage caused by Canada, its employees or agents to the Contractor or any third party. The Parties agree that no limitation of liability or indemnity provision applies to the Contract unless it is specifically incorporated in full text in the Articles of Agreement. Damage includes any injury to persons (including injury resulting in death) or loss of or damage to property (including real property) caused as a result of or during the performance of the Contract."

## For professional services requirements where the deliverables are copyrightable works:

## At Section 19 Copyright

In this section:
"Material" means anything that is created or developed by the Contractor as part of the Work under the Contract, and in which copyright subsists.
"Background Information" means all Intellectual Property that is not Foreground Information that is incorporated into the Work or necessary for the performance of
the Work and that is proprietary to or the confidential information of the Contractor, its subcontractors or any other third party;
"Foreground Information" means all Intellectual Property first conceived, developed, produced or reduced to practice as part of the Work under the Contract;
2. Material that is created or developed by the Contractor as part of the Work under the Contract belongs to the Contractor.
3. The Contractor grants to Canada a non-exclusive, perpetual, irrevocable, worldwide, fully-paid and royalty-free license to exercise all rights comprised in the Material, for any non-commercial government purposes. Canada may use independent contractors in the exercise of Canada's license pursuant to this clause.
4. At the request of the Contracting Authority, the Contractor must provide to Canada, at the completion of the Work or at such other time as the Contracting Authority may require, a written permanent waiver of moral rights as defined in the Copyright Act, R.S., 1985, c. C-42, in a form acceptable to the Contracting Authority, from every author that contributed to the Work. If the Contractor is an author, the Contractor permanently waives the Contractor's moral rights.
5. The Contractor also grants to Canada a non-exclusive, perpetual, irrevocable, world-wide, fully-paid and royalty-free license to use the Background Information to the extent that this information is required by Canada to exercise its rights to use the Material.
6. Copyright in any improvement, modification or translation of the Material made by or for Canada belongs to Canada. Canada agrees to reproduce the Contractor's copyright notice, if any, on all copies of the Material, and to acknowledge the Contractor's title to the copyright in the original Work on all copies of translations of the Material effected by or for Canada.
7. No restrictions other than those set out in this section must apply to Canada's use of the Material or of translated versions of the Material."

## 4. Term of Contract

### 4.1 Period of the Contract

The Work is to be performed during the period of contract award to February 29, 2016

## 5. Authorities

### 5.1 Contracting Authority

The Contracting Authority for the Contract is:
Name: Heidi Noble
Title: Procurement Officer
Environment Canada
Procurement and Contracting
Address: 867 Lakeshore Road, Burlington, Ontario L7S 1A1
Telephone: 905-319-6982
Facsimile: 905-336-8907
E-mail address: Heidi.Noble@canada.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 Technical Authority for the Contract is:
Name: $\qquad$
Title:
Organization:
Address: $\qquad$
Telephone:
Facsimile:
$\qquad$ $-$

E-mail address: $\qquad$
The Technical Authority named above 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

The Contractor's Representative for the Contract is:
Name: $\qquad$
Title: $\qquad$
Organization: $\qquad$
Address: $\qquad$
Telephone: $\qquad$
Facsimile:
E-mail address: $\qquad$

## 6. Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a Public Service Superannuation Act (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with Contracting Policy Notice: 2012-2 of the Treasury Board Secretariat of Canada.

## 7. Payment

### 7.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price of $\$$ (insert the amount at contract award).

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

## 8 Invoicing Instructions

### 8.1 Single Payment

(a) The Contractor must submit invoices upon completion of work in accordance with the section entitled "Invoice Submission" of the general conditions.
(b) Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:
(i) an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
(ii) all such documents have been verified by Canada;
(iii) the Work delivered has been accepted by Canada.

## 9. Certifications

### 9.1 Compliance

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.

## 10. Applicable Laws

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

## 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) Modified 2010B General Conditions - Professional Services (Medium Complexity) (2015-09-03)
(c) Annex A, Statement of Work;
(d) Annex B, Basis of Payment;
(e) the Contractor's bid dated

## ANNEX A <br> STATEMENT OF WORK

## 1. Background:

The scientific authority is leading studies on the deposition of polycyclic aromatic compounds (PACs) in lake sediments under the Joint Oil Sands Monitoring Program. In this program sediment cores have been collected from 5 lakes in the oil sands region in 2015 which need to be analysed for PACs. Previous work under the same program has involved analysis of PACs in cores from 24 lakes in the region. As a result of this previous work the analytical methodology is well defined as is the list of analytes and therefore compatibility with previous work is essential.

We are seeking an outside laboratory to conduct the analyses of PACs in the sediment samples. The contracted laboratory would be required to demonstrate that it has the necessary experience and instrumentation to conduct the analysis and that it can meet rigorous quality assurance criteria including low laboratory blank contamination, consistency of performance in the analysis of certified reference materials, and evidence of contributions to scientific publications on mercury isotope ratios in sediments.

## 2. Scope of work:

## Samples

The selected analytical lab would be provided with frozen, unprocessed, sediments (in labelled screw capped polypropylene jars) by the Scientific Authority as well as related information on the samples such as slice depth, lake name, etc to aid in the efficient processing of the samples.

## Methodology

General approach: The methodology should be based on US EPA Method 8270C/D and1625B for Organic Compounds by Isotope Dilution Quantification in multiple ion detection (MID) mode.

Surrogates: All samples must be spiked with deuterated surrogate standards prior to extraction
Extraction: Sediment should be Soxhlet extracted with dichloromethane. Use of pressurized liquid extraction technology is acceptable as well.

Column chromatography cleanup: Extracts must be routinely cleaned column chromatography on Silica gel. Additional steps that may be required include gel permeation column chromatography and treatment with activated copper to remove sulfur.

Instrumental analysis
Gas chromatography-mass spectrometry must be used. Instrumental analysis should be performed by low-resolution mass spectrometry (LRMS) with an RTX-5 capillary GC column (or equivalent high performance column). The LRMS must be operated at a unit mass resolution in the electron impact (EI) ionization mode using MID acquiring at least one characteristic ion for each target analyte and surrogate standard. Use of high resolution mass spectrometry is also acceptable but not essential.

For compatibility with previous work conducted on lake sediment cores under the Joint Oil Sands Monitoring Plan, 75 parameters ( 21 unsubstituted PACs, 28 alkylated PAC groups, and 26 individual alkylated PACs) must be analysed. A full list of analytes is provided in Attachment I.

Analyte identification: Individual chromatographic peak should be identified as a target compound if:

1. Peak responses must be at least three times the background noise level.
2. The retention time must be within three seconds of that predicted from the calibration run and the sample retention time reference (labelled compound).
3. Peak centroids for the quantification and confirmation ions must coincide within two seconds.
4. The relative ion abundance ratios must be within $20 \%$ of the opening calibration values.
5. Alkylated PACs should be identified based on comparison of the sample chromatogram retention times and peak patterns to those of a qualitative reference sample. Retention time windows for Alkylated PAC should be determined from a retention time reference extract run at the beginning of the instrumental run. 6. Two mass fragments must be monitored for each of the target analytes and their associated deuterated surrogate standard. Each pair of masses must provide a response within a given ratio to be a valid or "ratioing" peak
6. The list of individual alkylated standards must include labeled (deuterated) surrogates where available.

Concentrations of target PACs must be calculated using the isotope dilution method of quantification, by comparing the area of the quantification ion to that of the corresponding deuterium-labelled standard and correcting for response factors. Response factors should be determined daily using authentic PACs.

Concentrations in sediments should be reported on a dry weight basis. Therefore \% moisture should be determined and reported.

PACs, Alkylated PACs, and Alkylated PAC groups should be all analyzed in one GC-MS run.

## Quality Assurance

The source and batch of certified labelled and unlabeled external standards must be documented
Initial calibration should be performed using a five point calibration series of solutions that encompass the working concentration range. Calibration procedures should use the mean RRFs determined from the initial calibration to calculate analyte concentrations. Calibration should be verified at least once every 12 hours by analysis of a mid-level calibration solution.

Sample Specific Detection Limits are acceptable. These should be determined individually for every sample analysis run by converting the area equivalent of 3.0 times the estimated chromatographic noise height to a concentration in the same manner that target peak responses are converted to final concentrations.

Samples should be analyzed in batches with the following composition:

- Blanks - One procedural blank is analyzed for each batch. The procedural blank should be prepared by spiking an aliquot of the surrogate standard solution into a clean matrix.
- Precision and Recovery Samples -Include analysis of a spiked reference matrix (SPM) analyzed with each batch. The OPR sample should be prepared by spiking an aliquot of the authentic spiking solution into an accurately weighed in-house reference matrix (known to contain low background levels of target analytes).
- Duplicates - A sample duplicates should be analyzed for batches with 10 to 20 test samples.
- Reference Samples - Certified reference materials should be used to validate and periodically check methods. The preferred CRM is National Institute of Standards \& Technology SRM 1944 for compatibility with previous datasets.

Accreditation and Successful Participation in interlaboratory comparisons and other projects on PACs
The analytical laboratory and the specific methodology employed for PACs must be accredited through Canadian Association for Laboratory Accreditation (CALA). Successful participation in interlaboratory comparison exercises for alkylated PACs must also be provided. For example, in programs that have included PACs and alkylated PACs conducted by reference bodies such as NIST and the US Fish and Wildlife Service. Success participation would be demonstrated by results for PACs and alkylated PACs and comparison with concensus values from the program.

Evidence of previous successful projects on the analysis of PACs in freshwater sediments would be judged favorably.

## Reporting and Timeliness

Electronic copies of data reports will be provided to the Scientific Authority on completion of sample analysis. Electronic copies of all sample and QA chromatograms and calculations must be available upon request. Analyses must be completed by February 29, 2016.

## Attachment I

List of required analytes (75)

| Naphthalene |
| :--- |
| Acenaphthylene |
| Acenaphthene |
| 2-Methylfluorene |
| C2 Phenanthrenes/Anthracenes |
| Fluorene |
| Phenanthrene |
| Anthracene |
| C1 Phenanthrenes/Anthracenes |
| Fluoranthene |
| Pyrene |
| Benz[a]anthracene |
| Chrysene |
| Benzo[b]lluoranthene |
| Benzo[j,k]fluoranthenes |
| Benzo[e]pyrene |
| Benzo[a]pyrene |
| Perylene |
| Dibenz[a,h]anthracene |
| Indeno[1,2,3-cd]pyrene |
| Benzo[ghi]perylene |
| 2-Methylnaphthalene |
| 1-Methylnaphthalene |
| C1-Naphthalenes |
| Biphenyl |
| C1-Biphenyls |
| C2-Biphenyls |
| C2-Naphthalenes |
| 1,2-Dimethylnaphthalene |
| 2,6-Dimethylnaphthalene |
| C3-Naphthalenes |
| 2,3,6-Trimethylnaphthalene |
| 2,3,5-Trimethylnaphthalene |
| C4-Naphthalenes |
| C1-Acenaphthenes |
| C1-Fluorenes |
| 1,7-Dimethylfluorene |
| C2-Fluorenes |
| C3-Fluorenes |
| Dibenzothiophene |
| C1-Dibenzothiophenes |
| 2/3-Methyldibenzothiophenes |
| C2-Dibenzothiophenes |
| 2,4-Dimethyldibenzothiophene |
| C3-Dibenzothiophenes |
| C4-Dibenzothiophenes |


| 3-Methylphenanthrene |
| :--- |
| 2-Methylphenanthrene |
| 2-Methylanthracene |
| 9/4-Methylphenanthrene |
| 1-Methylphenanthrene |
| 3,6-Dimethylphenanthrene |
| 2,6-Dimethylphenanthrene |
| 1,7-Dimethylphenanthrene |
| 1,8-Dimethylphenanthrene |
| C3-Phenanthrenes/Anthracenes |
| 1,2,6-Trimethylphenanthrene |
| Retene |
| C4-Phenanthrenes/Anthracenes |
| C1-Fluoranthenes/Pyrenes |
| 3-Methylfluoranthene/Benzo[a]fluorene |
| C2-Fluoranthenes/Pyrenes |
| C3-Fluoranthenes/Pyrenes |
| C4-Fluoranthenes/Pyrenes |
| C1-Benzo[a]anthracenes/Chrysenes |
| 5/6-Methylchrysene |
| 1-Methylchrysene |
| C2-Benzo[a]anthracenes/Chrysenes |
| 5,9-Dimethylchrysene |
| C3-Benzo[a]anthracenes/Chrysenes |
| C4-Benzo[a]anthracenes/Chrysenes |
| C1-Benzofluoranthenes/Benzopyrenes |
| 7-Methylbenzo[a]pyrene |
| C2-Benzofluoranthenes/Benzopyrenes |
| 1,4,6,7-Tetramethylnaphthalene |
| \% Moisture |

## ANNEX B

## BASIS OF PAYMENT

### 1.0 Analyses of polycyclic aromatic compounds in sediment samples:

| Sample | Cost per Sample | Number of Samples | Total Cost |
| :---: | :---: | :---: | :---: |
| Sediment Samples | \$. | 100 |  |

## TOTAL TENDER PRICE (Canadian Currency)

\$ $\qquad$

## Applicable Tax

\$ $\qquad$

## TOTAL

\$ $\qquad$

### 2.0 For Cost Reimbursable Expenses

### 2.1 For Subcontract

The Contractor will be reimbursed the expenses for a subcontractor it reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and administrative overhead. These expenses will be paid upon submission of a copy of the invoice (choose "supported by receipt vouchers" (as applicable)) the contractor received from the subcontractor.

Total Estimated Cost of Subcontract: \$ $\qquad$ (insert amount at contract award)

## 2010B 10 (2013-03-21) Invoice Submission

1. Invoices must be submitted in the Contractor's name. The Contractor must submit invoices for each delivery or shipment; invoices must only apply to the Contract. Each invoice must indicate whether it covers partial or final delivery.
2. Invoices must show:
a. the date, the name and address of the client department, item or reference numbers, deliverable/description of the Work, contract number, Client Reference Number (CRN), Procurement Business Number (PBN), and financial code(s);
b. details of expenditures (such as item, quantity, unit of issue, unit price, fixed time labour rates and level of effort, subcontracts, as applicable) in accordance with the Basis of Payment, exclusive of Applicable Taxes;
c. deduction for holdback, if applicable;
d. the extension of the totals, if applicable; and
e. if applicable, the method of shipment together with date, case numbers and part or reference numbers, shipment charges and any other additional charges.
3. Applicable Taxes must be specified on all invoices as a separate item along with corresponding registration numbers from the tax authorities. All items that are zero-rated, exempt or to which Applicable Taxes do not apply, must be identified as such on all invoices.
4. By submitting an invoice, the Contractor certifies that the invoice is consistent with the Work delivered and is in accordance with the Contract.
