



<p>RETURN BIDS TO: RETOURNER LES SOUMISSIONS À:</p> <p>Bid Receiving - Environment and Climate Change Canada / Réception des soumissions – Environnement et Changement Climatique Canada</p> <p>Heidi Noble 867 Lakeshore Road Burlington, Ontario L7S 1A1</p> <p>BID SOLICITATION DEMANDE DE SOUMISSIONS</p> <p>PROPOSAL TO: ENVIRONMENT AND CLIMATE CHANGE CANADA</p> <p>We offer to perform or provide to Canada the services detailed in the document including any attachments and annexes, in accordance with the terms and conditions set out or referred to in the document, at the price(s) provided.</p> <p>SOUSSION À: ENVIRONNEMENT ET CHANGEMENT CLIMATIQUE CANADA</p> <p>Nous offrons d'effectuer ou de fournir au Canada, aux conditions énoncées ou incluses par référence dans le document incluant toutes pièces jointes et annexes, les services détaillés dans le document, au(x) prix indiqué(s).</p>	<p>Title – Titre Paleolimnological Analysis and Interpretation of Dated Sediment Cores</p>		
	<p>EC Bid Solicitation No. /SAP No. – N° de la demande de soumissions EC / N° SAP 500024986</p>		
	<p>Date of Bid solicitation (YYYY-MM-DD) – Date de la demande de soumissions (AAAA-MM-JJ) 2016 09 26</p>		
	<p>Bid Solicitation Closes (YEAR-MM-DD) - La demande de soumissions prend fin (AAAA-MM-JJ)</p> <p>at – à 2:00 P.M. on – le 2016 10 12</p>	<p>Time Zone – Fuseau horaire Eastern Daylight Time</p>	
	<p>F.O.B – F.A.B Not Applicable</p>		
	<p>Address Enquiries to - Adresser toutes questions à Heidi.Noble@canada.ca</p>		
	<p>Telephone No. – N° de téléphone 905-319-6982</p>	<p>Fax No. – N° de Fax</p>	
	<p>Delivery Required (YEAR-MM-DD) – Livraison exigée (AAAA-MM-JJ) 2017-03-31</p>		
	<p>Destination - of Services / Destination des services Ontario Region</p>		
	<p>Security / Sécurité There is no security requirement associated with this bid.</p>		
<p>Vendor/Firm Name and Address - Raison sociale et adresse du fournisseur/de l'entrepreneur</p>			
<p>Telephone No. – N° de téléphone</p>	<p>Fax No. – N° de Fax</p>		
<p>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)</p>			
<p>Signature</p>	<p>Date</p>		

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Paleolimnological Analysis and Interpretation of Dated Sediment Cores

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 (2016-04-04) 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):****Delete:** In its entirety**Insert:** "Deleted"**At Section 05 Submission of Bids, Subsection 05 (4)****Delete:** "sixty (60) days"**Insert:** "one hundred and twenty (120) days"**2. Submission of Bids**

- 2.1 Bids must be submitted to the Contracting Authority at the address indicated on page 1 of the bid solicitation by October 12, 2016 at 2:00 P.M.

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 seven (07) 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 (2 hard copies)

Section II: Financial Bid (1 hard copy)

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

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

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

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

Section II: Financial Bid

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

1.1 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.

- 1.2 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.

Section III - Certifications

1. Certifications Required Precedent to Contract Award

Bidders must provide the required certifications Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

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

1.1 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 Point Rated Technical Criteria

The Point Rated Technical Criteria is included in Part 4, Attachment 1

1.2 Financial Evaluation

1.2.1 Mandatory Financial Criteria

The Mandatory Financial Criteria is included in Part 4, Attachment 1

1.2.2 Evaluation of Price

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

For evaluation purposes only, the price of the bid will be determined as follows:

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.

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 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 \$40,000 (40).

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

<u>Bidder</u>	Bidder 1	Bidder 2	Bidder 3
Overall Technical Score	65/70	50/70	55/70
Bid Evaluated Price	\$47,000.00	\$45,000.00	\$40,000.00
<u>Calculations</u>			
Technical Merit Score	$60/70 \times 70 = 65$	$50/70 \times 70 = 50$	$55/70 \times 70 = 55$
Pricing Score	$40/47 \times 30 = 25.53$	$40/50 \times 30 = 24$	$40/40 \times 30 = 30$
Combined Rating	90.53	74	85
Overall Rating	1st	3rd	2nd

Part 4 – Attachment 1

Point Rated Technical Criteria

To be considered responsive, a bidder must obtain the required minimum 49 points of the overall 70 points for the evaluation of the Point Rated Technical Criteria.

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

Number	Criterion	Score
1	Paleo-indicators requested in the scope of work are to be performed a. Proposal clearly identifies the capacity to analyse requested paleoindicators (10) b. Proposal partially identifies the capacity to analyse requested paleoindicators (7) c. Proposal identifies limited or no capacity to analyse (1)	10
2	Detailed standard operating procedure for each paleolimnological method is provided as part of the proposal a. Proposal provides a detailed standard operating procedure for each method (15) b. Proposal provides partial standard operating procedures for one or more methods (8) c. Proposal provides limited or no information on standard operating procedures (1)	15
3	Must be able to demonstrate previous experience in the application of each paleolimnological method in dated sediment cores. a. Proposal demonstrates substantial previous experience based on published scientific papers, draft manuscripts, detailed reports from previous contracts (20) b. Proposal demonstrates some previous experience based on criteria in (a) (12) c. Proposal demonstrates limited or no previous experience based on criteria in (a) (1)	20
4	Experienced personnel are identified and brief CVs provided a. Proposal identifies an experienced scientist and associated team based on CVs provided (15) b. Proposal identifies a leader and associated team with some experience based on CVs provided (8) c. Proposal does not identify the experience of the project team or demonstrates very limited experience based on CVs provided (1)	15
5	Lab facilities and instrumentation for the work are identified a. Proposal identifies lab facilities and instrumentation highly suited for the proposed work (10) b. Proposal identifies lab facilities and instrumentation that is not entirely suited for the proposed work or lacks details on some facilities and instrumentation (7) c. Proposal does not lab facilities and instrumentation for the work or indicates lab facilities, equipment and instrumentation that would not be suitable (1)	10
Total	Minimum points required: 49 Points	70

Mandatory Financial Criteria

Bids which fail to meet the Mandatory Financial Criteria will be declared non-responsive.

The maximum budget allocated for this project must not exceed \$47,000.00 applicable taxes 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 and Climate Change to pay such an amount.

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.

PART 6 - RESULTING CONTRACT

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

Title: Paleolimnological Analysis and Interpretation of Dated Sediment Cores

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 (2016-04-04), 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."

A. For professional services requirements where the deliverables are copyrightable works:

Contractor to own Intellectual Property (IP) rights in Copyright

At Section 19 Copyright

Delete: In its entirety

- Insert:**
1. 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, world-wide, 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 period of the Contract is from Contract award to March 31, 2017.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Heidi Noble
 Title: Procurement Officer
 Environment and Climate Change 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: _____
 Title: _____
 Organization: _____
 Address: _____
 Telephone: ____-____-_____
 Facsimile: ____-____-_____
 E-mail address: _____

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: _____
 Title: _____
 Organization: _____
 Address: _____
 Telephone: ____-____-_____
 Facsimile: ____-____-_____
 E-mail address: _____

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 reimbursed for the costs reasonably and properly incurred in the performance of the Work in accordance with Annex B.

Limitation of Expenditure

- (a) Canada's total liability to the Contractor under the Contract must not exceed the amount shown above including all Customs duties and applicable taxes.

- (b) 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.
- (c) 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.

8 Invoicing Instructions

8.1 Milestone Payment

- (a) Canada will make milestone payments in accordance with the Schedule of Milestones detailed Annex B and the payment provisions of the Contract, up to 100 percent of the amount claimed and approved by Canada if:
 - (i) an accurate and complete claim for payment and any other document 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) all work associated with the milestone and as applicable any deliverable required have been completed and 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) (2016-04-04)
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment;
- (e) the Contractor's bid dated _____, (*insert date of bid*)

ANNEX A

STATEMENT OF WORK

Background:

The Technical Authority is the Environment and Climate Change Canada (ECCC) lead for paleolimnological studies pollutants in lake sediments in the oil sands region under the Canada-Alberta Joint Oil Sands Monitoring program (JOSMP). Atmospheric deposition has been identified as a potentially important route for delivery of polycyclic aromatic compounds (PACs) and heavy metals from oil sands upgraders and mining sites to aquatic and terrestrial environments in the region (Kelly et al. 2009;2010; Kurek et al. 2013; Kirk et al 2014). The impacts on fish and invertebrates in aquatic systems in the region are not well studied according to independent assessments undertaken by the Royal Society of Canada and by an independent advisory committee to the Minister of Environment.

Paleolimnological analysis is identified as a priority in the Canada-Alberta Joint Monitoring program (Environment Canada 2011, Lower Athabasca Water Quality Monitoring Program Section 5.2.5) to provide historical contextual information to aid in monitoring data interpretation and to determine historical/baseline conditions. Sediment cores from isolated lakes provide information on historical deposition and environmental changes when carefully collected, sampled and dated. Interpretations of fossil invertebrates in sediment can provide information on changes in regional climate and on previous fish populations in the aquatic system, as well as information on the influence of climate and stressors such as acid or toxicant deposition on aquatic ecosystems (e.g. Cladocera [Korhola and Rautio, 2001] and/or Chironomids [Walker, 2001]). Fossil diatoms provide important information on past nutrient dynamics, climate and other environmental stressors (Smol and Stoermer, 2010). Application of Visible-near-infrared spectroscopy (VNIRS) on dated sediment cores from the oil sands region enabled the reconstruction of past trends in lakewater chlorophyll *a* and demonstrated consistently greater VNIRS-chl*a* concentrations compared to pre-oil sands development levels, regardless of morphological and limnological characteristics, landscape position, bioavailable nutrient deposition, and dibenzothiophene (DBT)-inferred industrial impacts (Summers et al. 2016). Recent paleolimnological studies on lakes in the oil sands area have shown that *Daphnia*, a sentinel zooplankton, has not yet been negatively impacted by decades of high atmospheric PAC deposition. However, coincident with increases in PACs, climate-induced shifts in aquatic primary production related to warmer and drier conditions are the primary environmental drivers producing marked daphniid shifts (Kurek et al 2013).

ECCC requires a qualified laboratory to conduct additional specified paleolimnological analyses and interpretation on sediment cores collected under the JOSMP in order to contribute to scientific understanding of impacts on the aquatic environment in the region.

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- Summers JC, Kurek J, Kirk JL, Muir DCG, Wang X, Wiklund JA, Cooke CA, Evans MS, Smol JP. (2016). Recent warming, rather than industrial emissions of bioavailable nutrients, is the dominant driver of lake primary production shifts across the Athabasca Oil Sands Region. *PLOS One* 11(5): e0153987.
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Scope of work and Tasks:

The successful proponent must analyse lake sediment samples from dated cores provided by ECCC. These will be collected from natural ponds and lakes in northeastern Alberta. Proponents must supply a detailed operating procedure for each paleolimnological method as part of their proposal in order for the Technical Authority to make a thorough evaluation of the bid. Sediments will be analysed for the following paleo-indicators:

1. Diatom analyses: Standard methodology for diatoms must be followed (Battarbee et al., 2001). -- Approximately 50 samples will be provided by ECCC.
2. Inferred chlorophyll *a* and dissolved organic carbon (DOC): The cores must be analysed by visible near infrared reflectance spectroscopy (VNIRS) to obtain an absorbance spectrum or “signature” for each sample collected between 2,500 and 400 nm at 2-nm intervals, thus capturing the spectral sensitivity to chlorophyll and its derivatives in the visible light range. Sedimentary VNIRS must follow standard guidelines (Michelutti et al. 2010; Rouillard et al. 2011). Approximately 190 samples will be provided by ECCC.

The successful proponent must perform these analyses on dated sediment cores collected by ECCC from within the oil sands development area. Fossil diatom and VNIRS chlorophyll *a* and DOC analyses will be completed on selected sediment samples from selected cores. Using this data the successful proponent must also interpret the diatom data within the context of other paleoenvironmental data, providing estimates of environmental and ecological changes over the time captured by the sediment cores.

Deliverables:

1. The successful proponent must provide the Preliminary Reports on (1) diatoms and (2) VNIRS (chlorophyll *a* and DOC) analyses and data interpretation. The results must be submitted electronically in a series of Microsoft Excel files to the Technical Authority by December 31, 2016.

Estimated number of samples for the Preliminary Reports:

- (1) Diatoms analyses and data interpretation – 25 samples
- (2) VNIRS (chlorophyll a and DOC) analyses and data interpretation – 95 samples

- 2. The successful proponent must provide the Final Reports on (1) diatoms and (2) VNIRS (chlorophyll a and DOC) analyses and data interpretation. The results must be submitted electronically in a series of Microsoft Excel files to the Technical Authority by March 31, 2016

Estimated number of samples for the Final Reports:

- (1) Diatoms analysis and data interpretation – 25 samples
- (2) VNIRS (chlorophyll a and DOC) analysis and data interpretation – 95 samples

ANNEX B
BASIS OF PAYMENT

Sample Analyses	Number of Samples (A)	Cost per Sample (B)	Total Cost (A)*(B)
Diatoms	50	\$	\$
VNIRS (chlorophyll a and DOC)	190	\$	\$
Deliverable 1: Preliminary Reports			
Diatoms	25	\$	\$
VNIRS (chlorophyll a and DOC)	95	\$	\$
Deliverable 2: Final Reports			
Diatoms	25	\$	\$
VNIRS (chlorophyll a and DOC)	95	\$	\$

Total Price for Deliverable 1: Preliminary Reports \$ _____

Total Price for Deliverable 2: Final Reports \$ _____

Total Tender Price (Canadian Currency) \$ _____

Applicable Taxes \$ _____

Total Price (Including Applicable Taxes) \$ _____