



## RETURN BIDS TO:

## RETOURNER LES SOUMISSIONS À:

Travaux publics et Services gouvernementaux  
Canada  
Place Bonaventure,  
800 rue de la Gauchetière Ouest  
Voir aux présentes - See herein  
Montréal  
Québec  
H5A 1L6

## 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

### Vendor/Firm Name and Address

Raison sociale et adresse du  
fournisseur/de l'entrepreneur

### Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada  
Place Bonaventure,  
800 rue de la Gauchetière Ouest  
Voir aux présentes - See herein  
Montréal  
Québec  
H5A 1L6

<b>Title - Sujet</b> A&E rehabilitation - Contrecoeur	
<b>Solicitation No. - N° de l'invitation</b> EF928-181885/A	<b>Date</b> 2018-10-19
<b>Client Reference No. - N° de référence du client</b> EF928-18-1885	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$MTC-035-15064	
<b>File No. - N° de dossier</b> MTC-7-40328 (035)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2018-12-03</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Heure Normale du l'Est HNE
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Joel Lussier	<b>Buyer Id - Id de l'acheteur</b> mtc250
<b>Telephone No. - N° de téléphone</b> (514) 708-3582 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> MINISTERE DES TRAVAUX PUBLICS ET SERVICES GOUVERNEMENTAUX CANADA PL.BONAVENTURE,PORTAIL S-E,BUR.7300 800 RUE DE LA GAUCHETIERE O. MONTREAL Québec H5A1L6 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

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

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## **REQUEST FOR PROPOSAL (RFP)**

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## **SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)**

### **SI1 INTRODUCTION**

1. Public Works and Government Services Canada (PWGSC) intends to retain an individual consulting firm or joint venture to provide the professional services for the project as set out in this Request for Proposal (RFP).
2. This is a single phase selection process. The nature of the requirement and the anticipated limited number of response by the industry leads PWGSC to believe that this approach will not unduly force a large number of firms to expend an overall unreasonable amount of effort in response to PWGSC.
3. Proponents responding to this RFP are requested to submit a full and complete proposal. The proposal will cover not only the qualifications, experience and organization of the proposed Consultant Team, but also the detailed approach to the work, and the pricing and terms offered. A combination of the technical and price of services submissions will constitute the proposal.

### **SI2 PROPOSAL DOCUMENTS**

1. All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are hereby incorporated by reference into and form part of this solicitation and any resultant contract.

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

2. The following are the proposal documents:

- (a) Supplementary Instructions to Proponents (SI);  
R1410T (2017-08-17), General instructions (GI) – Architectural and/or Engineering services – Request for Proposal;  
Submission Requirements and Evaluation (SRE);

Subsection 2.b. of section GI16, Submission of proposal of R1410T, incorporated by reference above, is deleted in its entirety and replaced with the following:

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- b. send its proposal only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified on page 1 of the RFP;
  - (b) the general terms, conditions and clauses, as amended, identified in the Agreement clause;
  - (c) Project Brief / Terms of Reference;
  - (d) the document entitled "Doing Business with Quebec Region";
  - (e) the Security Requirements Check List (SRCL);
  - (f) any amendment to the solicitation document issued prior to the date set for receipt of proposals; and
  - (g) the proposal, Declaration/Certifications Form and Price Proposal Form.
3. Submission of a proposal constitutes acknowledgment that the Proponent has read and agrees to be bound by these documents.

### **SI3 QUESTIONS OR REQUEST FOR CLARIFICATION**

Questions or requests for clarification during the solicitation period must be submitted in writing to the Contracting Authority named on the RFP - Page 1 as early as possible. Enquiries should be received no later than 5 working days prior to the closing date identified on the front page of the Request for Proposal. Enquiries received after that date may not be answered prior to the closing date of the solicitation.

### **SI4 CANADA'S TRADE AGREEMENTS**

This procurement is subject to the provisions of the North American Free Trade Agreement (NAFTA), the World Trade Organization - Agreement on Government Procurement (WTO-AGP), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Canadian Free Trade Agreement (CFTA).

### **SI5 CERTIFICATIONS**

#### **1. Integrity Provisions – Declaration of Convicted Offences**

In accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Proponent must **provide with its**

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**bid, as applicable**, to be given further consideration in the procurement process, the required documentation as per R1410T (2017-08-17), General instructions 1 (GI1), Integrity Provisions – Proposal, **section 3b**.

## **2. Federal Contractors Program for Employment Equity - Proposal Certification**

By submitting a proposal, the Proponent certifies that the Proponent, and any of the Proponent's members if the Proponent is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the Employment and Social Development Canada (ESDC) - Labour's website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html>).

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

Canada will also have the right to terminate the Agreement for default if a Consultant, or any member of the Consultant if the Consultant is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Agreement.

The Proponent must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification (see Appendix E - Declaration/Certifications Form), before contract award. If the Proponent is a Joint Venture, the Proponent must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

## **SI6 SECURITY REQUIREMENT**

There is no security requirement related to this project.

## **SI7 - WEBSITES**

The connection to some of the Web sites in the RFP is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Employment Equity Act

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<http://laws-lois.justice.gc.ca/eng/acts/E-5.401/index.html>

Federal Contractors Program (FCP)

<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html>

Certificate of Commitment to Implement Employment Equity form LAB 1168

<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=profile&form=lab1168&dept=sc&lang=e>

Ineligibility and Suspension Policy

<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>

Code of Conduct for Procurement

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Lobbying Act

<http://laws-lois.justice.gc.ca/eng/acts/L-12.4/?noCookie>

Buy and Sell

<https://buyandsell.gc.ca/>

Supplier Registration Information

<https://srisupplier.contractscanada.gc.ca>

Consultant Performance Evaluation Report Form

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf>

Canadian economic sanctions

<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

National Joint Council (NJC) Travel Directive

<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>

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## **TERMS, CONDITIONS AND CLAUSES**

### **AGREEMENT**

1. The Consultant understands and agrees that upon acceptance of the offer by Canada, a binding Agreement shall be formed between Canada and the Consultant and the documents forming the Agreement shall be the following:
  - (a) the Front Page and this Agreement clause;
  - (b) the General Terms, Conditions and Clauses, as amended, identified as:
    - R1210D (2017-08-17), General Condition (GC) 1 - General Provisions – Architectural and/or Engineering Services
    - R1215D (2016-01-28), General Condition (GC) 2 - Administration of the Contract – Architectural and/or Engineering Services
    - R1220D (2015-02-25), General Condition (GC) 3 - Consultant Services
    - R1225D (2015-04-01), General Condition (GC) 4 - Intellectual Property
    - R1230D (2016-01-28), General Condition (GC) 5 - Terms of Payment – Architectural and/or Engineering Services
    - R1235D (2011-05-16), General Condition (GC) 6 - Changes
    - R1240D (2011-05-16), General Condition (GC) 7 - Taking the Services Out of the Consultant's Hands, Suspension or Termination
    - R1245D (2016-01-28), General Condition (GC) 8 - Dispute Resolution – Architectural and/or Engineering Services
    - R1250D (2017-11-28), General Condition (GC) 9 - Indemnification and Insurance
  - (c) Supplementary Conditions
  - (d) Agreement Particulars
  - (e) Project Brief / Terms of Reference;
  - (f) the document entitled "Doing Business with Quebec Region";
  - (g) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (h) the proposal, the Declaration/Certifications Form and the Price Proposal Form.
2. The documents identified above by title, number and date are hereby incorporated by reference into and form part of this Agreement, as though expressly set out herein, subject to any other express terms and conditions herein contained.

The documents identified above by title, number and date are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is

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available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

3. If there is a discrepancy between the wording of any documents that appear on the following 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) any amendment or variation in the Agreement that is made in accordance with the terms and conditions of the Agreement;
  - (b) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (c) this Agreement clause;
  - (d) Supplementary Conditions;
  - (e) General Terms, Conditions and Clauses;
  - (f) Agreement Particulars;
  - (g) Project Brief / Terms of Reference;
  - (h) the document entitled "Doing Business with Quebec Region";
  - (i) the proposal.

## **SUPPLEMENTARY CONDITIONS (SC)**

### **SC1 SECURITY REQUIREMENT**

1. There is no security requirement related to this project

### **SC2 LANGUAGE REQUIREMENTS**

1. Communication between Canada and the Consultant shall be in the language of choice of the Consultant Team, which shall be deemed to be the language of the Consultant's proposal.
2. The Consultant's services during construction tender call (such as addenda preparation, tenderers' briefing meetings, technical answers to questions by bidders, including translation of bidder's questions) shall be provided expeditiously in both languages, as necessary.
3. The Consultant's services during construction shall be provided in the language of choice of the Contractor. The successful Contractor will be asked to commit to one or other of Canada's official languages upon award of the Construction Contract and, thereafter construction and contract administration services will be conducted in the language chosen by the Contractor.



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4. Other required services in both of Canada's official languages (such as construction documentation) are described in detail in the Project Brief.
5. The Consultant Team, including the Prime Consultant, Sub-Consultants and Specialists Consultants shall ensure that the services being provided in either language shall be to a professional standard.

### **SC3 FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - DEFAULT BY THE CONSULTANT**

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

### **AGREEMENT PARTICULARS**

The Agreement Particulars will be issued at time of award of contract and will identify the fee to be paid to the Consultant for the services determined in the Price Proposal Form.

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## **ANNEX B - PRICE PROPOSAL FORM**

INSTRUCTIONS: Complete this Price Proposal Form and submit in a **separate sealed envelope** with the Name of Proponent, Name of Project, PSPC Solicitation Number, and the words "PRICE PROPOSAL FORM" typed on the outside of the envelope. Price Proposals are not to include Applicable Taxes.

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## ANNEX E - DECLARATION/CERTIFICATIONS FORM

**Project Title:**

**Name of Proponent:**

**Street Address:**

**Mailing Address:**

Address:

Street Number / Street Name, Unit / Suite / Apartment Number

City, Province, Territory

Postal Code

**Telephone Number:** (    )

**Fax Number:** (    )

**E-Mail:**

**Procurement Business Number:**

<b>Type of Organization:</b>  _____ Sole Proprietorship  _____ Partnership  _____ Corporation  _____ Joint Venture	<b>Size of Organization:</b>  Number of Employees _____  Graduate Architects / Professional Engineers _____  Other Professionals _____  Technical Support _____  Other _____
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## **ANNEX E - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

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

I, the Proponent, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a proposal non-responsive, or will declare a consultant in default, if a certification is found to be untrue, whether during the proposal evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Proponent's certifications. Failure to comply with any request or requirement imposed by Canada may render the proposal non-responsive or constitute a default under the contract.

For further information on the Federal Contractors Program for Employment Equity visit Employment and Social Development Canada (ESDC)-Labour's website.

Date: \_\_\_\_\_(YY/MM/DD) (If left blank, the date will be deemed to be the bid closing date.)

Complete both A and B.

A. Check only one of the following:

- ☐ A1. The Proponent certifies having no work force in Canada.
- ☐ A2. The Proponent certifies being a public sector employer.
- ☐ A3. The Proponent certifies being a federally regulated employer being subject to the *Employment Equity Act*.
- ☐ A4. The Proponent certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.
- A5. The Proponent has a combined work force in Canada of 100 or more employees;  
and

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## **ANNEX E - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

- ☐ A5.1. The Proponent certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with ESDC-Labour.

**OR**

- ☐ A5.2. The Proponent certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- ☐ B1. The Proponent is not a Joint Venture.

**OR**

- ☐ B2. The Proponent is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the General Instructions)

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## **ANNEX E - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

### **Former Public Servant (FPS) - Certification**

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, proponents 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 proposals is completed, Canada will inform the Proponent 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 proposal 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

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*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.*

## **ANNEX E - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

### **Former Public Servant in Receipt of a Pension**

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

YES ( ) NO ( )

If so, the Proponent 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, proponents agree that the successful Proponent'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 Proponent a FPS who received a lump sum payment pursuant to the terms of a work force reduction program? YES ( ) NO ( )

If so, the Proponent 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.

N° de l'invitation - Solicitation No.  
EF928-181885/MTC

N° de la modif - Amd. No.

Id de l'acheteur - Buyer ID  
MTC-035

N° de réf. du client - Client Ref. No.  
EF928-181885

File No. - N° du dossier  
MTC-7-40328

N° CCC / CCC No./ N°VME -MS

## ANNEX E - DECLARATION/CERTIFICATIONS FORM (CONT'D)

### Name of Proponent:

#### DECLARATION:

I, the undersigned, being a principal of the proponent, hereby certify that the information given on this form and in the attached proposal is accurate to the best of my knowledge. If any proposal is submitted by a partnership or joint venture, then the following is required from each component entity.

.....  
name signature  
.....  
title  
I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....  
name signature  
.....  
title  
I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....  
name signature  
.....  
title  
I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

During proposal evaluation period, PWGSC contact will be with the following person:\_\_\_\_\_.

Telephone Number: (    ) \_\_\_\_\_ Fax Number: (    ) \_\_\_\_\_

E-mail: \_\_\_\_\_

This Annex "E" should be completed and submitted with the proposal, but may be submitted afterwards as follows: if Annex "E" is not completed and submitted with the proposal, the Contracting Authority will inform the Proponent 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 proposal non-responsive.





## REQUEST FOR PROPOSAL

Remediation plan, Plans & Technical Specifications and Environmental monitoring  
Former Contrecœur Landfill, Contrecœur, QC

Requested by: **Environmental Services**  
**Public Works and Government Services Canada**  
**Quebec Region**

Project No.: **R.078691.200**

**October 2018**

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## APPENDICES

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APPENDIX A: Site Plan

APPENDIX B: Submission form

## **1.0 CONTEXT**

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### **1.1 Context of the work request**

The Environmental services of Publics Works and Government Services Canada (PWGSC) wishes to obtain the following environmental services of an environmental consulting firm (hereinafter the Consultant):

- Develop the environmental remediation or management plan depending on the retained management scenario.
- Prepare the plans & technical specifications, drawings and tender documents as well as the final cost estimate for the project.
- Provide a technical support role during the bidding period and Contract awarding for the remediation work.
- Conduct the environmental monitoring to ensure that the construction work meets the specifications of the environmental remediation and / or management plan (plans & specifications) as well as applicable regulations.

### **1.2 Site description**

The land concerned does not have a civic address, but it is lot 4,812,972 (renovated cadastre du Quebec) which corresponds to former lots n ° 422 and 423 of the cadastre of the parish of Contrecœur, div. of registration Verchères, MRC Lajemmerais.

The activities of the landfill that took place on the site between 1972 and 1996 resulted in the generation of contaminants in the environment. In 2015<sup>1</sup>, the former Contrecœur landfill was added to the Government of Canada real estate inventory under the Canada Business Corporations Act. As the site manager, PWGSC undertook a better understanding of the environmental issue extent while ensuring that this site did not pose a threat to the health and safety of the public. For example, in 2016, two on-site environmental studies confirmed the presence of soils, sediments and water (both underground and surface) in excess of the applicable guidelines or criteria for various chemical parameters. The site is also ranked a category 1 site (rate of 77.3 - High Priority for Action) in the Canadian Council of Ministers of the Environment (CCME) National Classification System for Contaminated Sites (NCSCS).

The site is located on the edge of Rang du Ruisseau, about 3 km as the crow flies northeast of the center of the urbanized area of the Town of Contrecœur. From this point, you can reach the former landfill by taking Saint-Antoine street east (which crosses Autoroute 30), then by taking the rang du Ruisseau to the north. The site entrance is located approximately 2.3 km from this intersection and can be easily recognized by the

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<sup>1</sup> On August 27, 2008, 173130 Canada Inc. was dissolved by the Director of Corporations. On May 1, 2015, Justice Canada confirmed that this site was to be considered as a federal building in the Government of Canada real estate inventory.

presence of a rust-colored metal panels fence installed along the rang du Ruisseau. The site can be accessed by passing over a concrete culvert where a locked barrier is installed and allows to restrict access to authorized vehicles only.

The concerned lot corresponds to a parcel of land much longer than wide, oriented in its greatest dimension along a north-west / south-east axis. According to the cadastral data, its area is 165,435 m<sup>2</sup>, and its approximate average dimensions are 110 m (south-west / north-east axis) per 1,400 m. (north-west / south-east axis). Two distinct zones can be identified on the ground, that is to say the front part (along the south side of the rang du Ruisseau) and the rear part (further from the rang du Ruisseau to La Prade stream). The front part, representing approximately 60% of the total area of the lot, consists of a more or less sparsely mature vegetated vacant land which is elevated compared to the surrounding agricultural land fields. The rear part (approximately 40% of the lot), is composed of a dense forest with mature trees. In the transition zone between the two parts, there is rectangular shaped artificial pond of a 40 m by 70 m dimension. Its depth is unknown. Also, in the wooded area, a depression is present southeast of the artificial pond. This depression is filling with water during snowmelt and dries up in the summer.

No buildings are present on the site and no water or electricity supply is provided. The property under study and adjacent lands are located in an agricultural zone. The nearest inhabited dwelling, likely to be supplied with potable water through municipal aqueduc, is located approximately 200 m southwest of the site, on the edge of rang du Ruisseau.

Currently, there is no use of the site, and it is vacant and likely to remain as is in the years to come.

### **1.3 Environmental context (data from previous environmental studies)**

#### **1.3.1 *History of the use of the site***

The following paragraphs briefly summarize historic information's of the use of the investigated site.

The site under study would have been wooded or used for agricultural purposes until the early 1970s. In 1972, the owner at the time, Pierre Pagé (through his company Transport Pierre Pagé Ltd.) filled an application for a permit from the *Conseil de la Paroisse de Contrecœur* for the construction of an incinerator and the burial of incineration by-products on lot 423-P. This application was accepted on a conditional basis pending on provincial authorities approvals. In 1974, Mr. Pagé's application was amended to operate a landfill site for industrial waste on the same lot. This application also accepted by the council, was subject to compliance with the requirements established by the Québec Ministry of the Environment.

For several years, Mr. Pagé has imported various kinds of industrial waste on site, the majority (90%) of which comes from the Sidbec-Dosco steel mills and consists of fluff (shredder residue from car crushes). Not complying with the environmental requirements to which he was subject, and following numerous complaints and inspections by the

Environmental Protection Service, a ministerial order was issued against Mr. Pagé in October 1979 to cease all non-agricultural use on lots 422 and 423. In 1980, an interlocutory injunction by the Quebec Superior Court (which became a permanent injunction in 1981), obliged Mr. Pagé's company to cease operating the site and restore it in accordance with the regulations.

Despite these injunctions, Mr. Pagé's site was still used illegally for several years to meet the demands of the region's factories, Sidbec-dosco, Sidbec-Feruni, Iron Ore and Stelco. as well as refractory bricks, foundry sands, tires, ashes, barrels, demolition wood, sheet metal, etc. Automotive carcasses were also stored on-site and some inspections indicated the deposit of hydrocarbon-contaminated materials directly on the ground. According to the available information, some of these materials were only temporarily transited through the site for disposal elsewhere at a later date. In addition, some complaints mentioned the practice of burning waste on the site although these were denied by the owner.

A memorandum from the Quebec Ministry of the Environment in 1985 indicated an estimated volume of waste of 60,000 m<sup>3</sup> at the site.

In an attempt to regularize his situation with the authorities, Mr. Pagé made an application in 1987 for the establishment of a sanitary landfill site for the exclusive use of Sidbec-Dosco Inc. and Sidbec-Feruni Inc. Initially accepted by the CPTAQ and the Ministry of the Environment, the project will ultimately be refused for administrative matters by the CPTAQ and will never officially be created. In 1987, some chemical analyzes carried out by the Ministry of the Environment on waste from the site appeared to indicate the presence of hazardous waste.

In 1989, a certificate of approval from the Ministry of the Environment was issued authorizing the restoration of the former landfill site (lots 422 and 423) by carrying out the following works:

- Covering the site with a layer of clay that is at least 50 cm thick followed by a 20 cm thick layer of organic topsoil;
- Revegetation of the site with different species of trees;
- Proceed with the sampling the resurfaced water from the embankment, drainage ditches and groundwater.

In 1990, following the death of Mr. Pagé, 173130 Canada Inc. (under the name Eau Sol Air Ltée) acquires lots 421, 422, 423 and part 167 of Transport Pierre Pagé Ltée. The Company agreed to undertake the restoration work required by the Ministry. In 1996, partial restoration works were finally carried out, in particular:

- Recovery of the apparent metal scrap;
- Demolition of the metal unloading dock and disposal of demolition waste;
- Reducing slopes steepness;
- Selective recovery (depending on the areas already covered and the vegetation in place) of the site by 9 000 m<sup>3</sup> with clayed soil. It appears that the recovery land used came from dredging work on the St. Lawrence River near St-Joseph de Sorel; and,
- Revegetation (herbaceous and reforestation).

### **1.3.2 Environmental studies**

For your information, the following studies and documents will be available after the contract is awarded:

- CIMA+, Août 2016. Évaluation environnementale de site Phase I et II, Lot 4 812 972, Ancien dépotoir de Contrecœur (Québec). Rapport final. Dossier M02681J. 61 p. + figures, tableaux et annexes.
- TECHNOREM INC., Novembre 2017. Évaluation environnementale de site Phase III, Propriété de l'ancien dépotoir de Contrecœur (Québec). Rapport final, PR16-75, 120 p. + figures, tableaux et annexes.
- TECHNOREM INC., Mars 2018. Suivi de la qualité de l'eau souterraine et de surface à l'ancien dépotoir de Contrecœur (Québec). Rapport final, PR17-88, 35 p. + figures, tableaux et annexes.
- GROUPE HEMISPHERES, Décembre 2017, Inventaires floristiques et fauniques, ancien dépotoir de Contrecœur, rapport d'étape – Automne 2017, 13 p. + annexes.
- SNC-LAVALIN INC., Juillet 2018. Analyse de risque toxicologique et écotoxicologique. Ancien dépotoir de Contrecœur - Énoncé du problème, Ref : 653353, 49 p. + figures, tableaux et annexes.

For your information, the following paragraphs summarize each of the studies listed above :

#### **CIMA+, 2016**

In 2015, CIMA+ was mandated by PWGSC to undertake Phases I and II<sup>2</sup> Environmental Site Assessment (ESA) on the above mentioned property.

This study showed the presence of contamination of the various media present on the site (soils, sediments, surface and groundwater) with concentrations above the applicable criteria and recommendations.

In soils, metal concentrations were found in exceedances of the most restrictive CCME or MDDELCC criteria in the soil horizons covering the waste and in the horizons underlying the waste. The main metals involved are chromium, cobalt, copper, nickel, cadmium, lead and zinc, and less frequently arsenic, tin, molybdenum and manganese. Concentrations of PAHs, HP C10-C50, HP F1-F4 and BPC exceeding the applicable criteria were obtained in soil samples taken below the residual materials. Soil contamination appears

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<sup>2</sup> CIMA+, Août 2016. Évaluation environnementale de site Phase I et II, Lot 4 812 972, Ancien dépotoir de Contrecœur (Québec). Rapport final. Dossier M02681J. 61 p. + figures, tableaux et annexes.

to correlates with the presence of the residual material mound but it is also not confined to the mound area itself. It should be noted that the soils from the back of the lot, south-east of the pond, do not exceed the most restrictive CCME or MDDELCC criteria for all analyzed parameters.

In regards for the sediments from the drainage adjacent to the site, analytical results showed exceedances of the occasional effect level (OEL) threshold values for cadmium, chromium, copper, lead and zinc, the probable effect level (PEL) threshold in zinc, and lead exceedance of the threshold effect level (TEL). One result also shows the OEL exceeded for PCBs.

All surface water results showed concentrations in exceedances with the most restrictive CCME or MDDELCC criteria for at least one of the parameters analyzed. Each station exceeded the criteria for metals, mainly aluminum, arsenic, chromium, boron, selenium, zinc and uranium, and some stations showed exceedances for suspended solids (SS) and biochemical oxygen demand (BOD). It should be noted that surface water from the ditches showed no exceedance of the criteria of "*Résurgence dans les eaux de surface et infiltration dans les égouts*" of the Soil Protection and Remediation of Contaminated Sites Policy, with the exception of selenium concentrations.

All groundwater samples (in the residual materials mound) showed concentrations in exceedances of the most restrictive CCME and MDDELCC criteria for several analyzed parameters: PH C10-C50, MAHs, PAHs, PCBs , metals, cyanide, fluorides, sulfides, dioxins & furans and formaldehyde.

The groundwater results from the confined aquifer underlying a clay layer) were in exceedance with the most restrictive CCME and MDDELCC criteria for various analyzed parameters such as PAHs (anthracene), metals (boron, selenium and sodium), sulphides, chlorides and ammoniacal nitrogen. The study states that, in addition to the marginal exceedance of the CCME "freshwater" criterion for one of the PAH parameters (anthracene), other parameters exceeding the more restrictive criteria in the deep groundwater water table underlying could be related with natural concentrations found water confined in clay horizon associated with the Champlain Sea.

In addition, methane concentrations (CH<sub>4</sub>) measured in two of the three monitoring wells installed in the mound, exceeded the lower explosive limit (LEL) whether for instantaneous, static or dynamic measurements. The presence of CH<sub>4</sub> (methane) within the residual materials deposit represents an issue in terms of the potential reuse of the site.

The CIMA+ study evaluates the residual materials volume on the site at 166,500 m<sup>3</sup>. It is mainly (95%) composed of automotive "fluff", a residual material that is excluded from the designation of a hazardous substance in accordance with Article 2, Clause 1, Paragraph 19 of the *Règlement sur les matières dangereuses* (RMD). Thus, the non-hazardous residual materials proportion present on the site is estimated at 98%.

The report recommended to conduct a complementary investigation at the surface water level to assess their quality and their connection with the water network in order to validate the impact of site contaminants in the boundary surface waters.

### **TECHNOREM INC. 2017**

In 2016, TechnoRem was retained by Public Work and Government Services Canada PWGSC to conduct a Phase III<sup>3</sup> environmental assessment, in view of elaborating the best options of remediation scenario or site management for the site of the former Contrecœur landfill.

The geology of the site, at the location of residual material accumulations, is characterized by a 0,4 m thick fill layer of clayey silt covering residual materials (nonferrous automobile shredder residue, tires, drums, ashes, bricks, etc.) with a thickness reaching 7.2 m, which overly clayey native soils, or silty to sandy soils in the southeast part of the site.

The two (2) main hydrostratigraphic units at the site are the saturated portion of residual material accumulations (unconfined water table) and the underlying, more or less silty, native clays (aquitard). Permeability tests indicated mean hydraulic conductivity of  $2.16 \times 10^{-6}$  m/s in the residual materials and  $3.37 \times 10^{-10}$  m/s in the clay unit. Groundwater flow in the residual material accumulations is radial with a mean horizontal gradient ranging from 0.008 to 0.05 m/m. In the clayey unit, the main flow component is vertical. Artesian pressure was noted in a well nest located near the site northwest limit.

Leachate tests conducted on residual material samples indicated that they are not hazardous materials according to the Hazardous Material Bylaw. Soils that showed concentrations above the CCME Canadian Soil Quality Guidelines (CSQG) or alternative standards (for example: A criteria of the MDDELCC *Guide d'intervention*) include the fill layer covering the residual materials and the native soils underlying the residual materials, down to 1.4 m. The main contaminants include metals, PH C<sub>10</sub>-C<sub>50</sub>, PAHs, F2-F3 fractions, VOCs, PCBs and dioxins and furan (DF). Soils in drainage ditches exhibit concentrations above CSQG for some metals. The revised quantities of residual and hazardous materials are estimated to 63,900 m<sup>3</sup> and 8,280 m<sup>3</sup>, respectively, whereas contaminated soils total 25,650 m<sup>3</sup> (excluding native clayey soils with elevated concentrations for some metals (B, Cr, Ni) that could be natural in origin).

The compilation of available analytical data on surface waters indicate exceedances for metals, DF, suspended matter and BOD<sub>5</sub>. Toxicity testing conducted on surface water sample collected at the site outlet revealed no toxicity. Groundwater from wells located within the residual material accumulations is contaminated with metals, chlorides, fluorides, cyanides, sulfides, PCBs, DF, PAHs, VOCs, PH C<sub>10</sub>-C<sub>50</sub>, and F1-F2 fractions.

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<sup>3</sup> TECHNOREM INC., Novembre 2017. Évaluation environnementale de site Phase III, Propriété de l'ancien dépôt de Contrecœur (Québec). Rapport final, PR16-75, 120 p. + figures, tableaux et annexes.



Groundwater from wells installed in native soils, outside the residual material accumulations, are impacted by metals, and in some cases (PO-15-05), by sulfides, ammoniacal nitrogen, PAH and DF. Some high metal concentrations could be natural in origin and related to saline groundwater found in Champlain Sea clay deposits.

The biogas survey conducted in 2016 confirmed the presence of methane, which was measured in relatively high concentrations (above 30% LEL) in wells distributed over the whole residual material accumulations.

The site hydrostratigraphy is characterized by two (2) main units: 1) an unconfined water table represented by the saturated portion of residual materials, and 2) the underlying aquitard composed of native clayey to silty deposits, down to 15 m.

Rain water infiltrating the residual materials dissolves various inorganic and organic contaminants. This water flows radially in the residual material accumulations and is collected, along with runoff waters, by the drainage ditches bounding the site that empty into the stream running along the northwest site limit. In the native clay unit ( $K = 3.4 \times 10^{-10}$  m/s), groundwater only flows a few centimetres per year, with the main flow component being vertical, under the influence of gravity.

A groundwater flow model was developed by using the SEEP2D two-dimensional numerical code. The model, calibrated with the groundwater level data collected in November 2016, allows estimating an incoming flow equal to 10.5 m<sup>3</sup>/d. The simulation results indicate that surface waterproofing would significantly lower the volume of water entering vertically. On an annual basis, the mean quantity of infiltration water would decrease by nearly 90 %, from 3,150 m<sup>3</sup> to 360 m<sup>3</sup>.

The retained scenarios for the environmental management are the followings:

- Scenario 1: Surface waterproofing, toxicological and ecotoxicological risk analysis, and environmental monitoring.
- Scenario 2: Surface water pumping and treatment, toxicological and ecotoxicological risk analysis, and environmental monitoring.
- Scenario 3: Excavation and offsite disposal of residual materials and contaminated soils and environmental monitoring.

The recommendations of the Technorem report are as follows:

- Conduct an annual monitoring of the quality of the surface water quality (six stations) and groundwater (six monitoring wells). The parameters of interest include metals (Al, As, B, Ba, Cd, Cr, Cu, Fe, Mn, Mo, Na, Ni, Pb, Se, U, Zn) and other inorganic parameters (chlorides, fluorides sulphides, ammoniacal nitrogen, cyanides), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), dioxins and furans (DF) and suspended solids.
- Measure surface water levels and flows in ditches and streams along the former landfill.

- Carry out additional sampling to confirm the natural origin of the high metal concentrations that appear to characterize clay soils and saltwater underground (Champlain Sea deposits).

#### **TECHNOREM INC. 2018<sup>4</sup>**

In 2018, PWGSC has retained the services of Technorem inc. to conduct groundwater and surface water sampling in the Fall 2017 in order to assess the site baseline and to monitor the evolution of the groundwater and surface water quality on-site.

Groundwater was sampled from four (4) monitoring wells in the backfill (PO-15-02, PO-15-03, PO-16-09 and PO-16-14) and two (2) monitoring wells in natural soils (PO-15-05 and PO-16-15).

The November 2017 analytical results for groundwater samples from four (4) monitoring wells installed in the backfill generally confirm previous data, with concentrations above the CCME CSQG or alternative standards for metals (primarily arsenic, boron, chromium, iron, manganese, molybdenum, nickel and zinc), chlorides, fluorides, sulphides, total cyanides, ammoniacal nitrogen, PCBs, dioxins and furans, PAHs and F1-F2 fractions.

The results for the two (2) monitoring wells located in natural soils also confirm previous results with exceedances of metals, chlorides and ammonia nitrogen, as well as dioxins and furans. The problem metals are mainly boron, barium, iron, manganese and sodium. The exceedances for at least some of these metals (e.g. Ba, Mn and Na) could be naturally occurring, being associated with residual salt water in the Champlain Sea sediments. Fluorides, analyzed for the first time in 2017, also showed an exceedance of the federal recommendation in monitoring wells PO 16-15.

Surface water was sampled from six (6) stations located in the ditches surrounding the sites : three (3) ditches along the northeast site (ES-15-09 and ES-16-18), southwest (ES-15-03, ES-15-05 and ES-16-17) and northwest (ES-15-01).

The November 2017 results generally confirm previous data with exceedances for metals, total suspended solids (TSS) and dioxins and furans in surface waters sampled from peripheral ditches. The problematic metals are mainly aluminum, boron, copper, iron and manganese, but other metals may also show exceedances in surface water at one or more stations. The results for total extractable metals show significantly higher concentrations than dissolved metals, particularly for aluminum, iron and manganese, resulting from a large (and variable) contribution of TSS.

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<sup>4</sup> TECHNOREM INC., Mars 2018. Suivi de la qualité des eaux souterraine et de surface à l'ancien dépotoir de Contrecœur (Québec). Rapport final, PR16-75, 32 p. + figures, tableaux et annexes.

The exceedances observed in the samples taken upstream of the site (ES-16-17 and ES-16-18) may result from a contribution from the TSS, input from the upstream and / or high natural levels. In the case of the ditch along the northwestern boundary of the site (ES-15-01), surface water from upstream (southwest) could contribute to or dilute the contamination.

Based on the results of the characterization and environmental monitoring carried out on the site since 2015, TechnoRem recommended to:

- Continue annual monitoring of groundwater and surface water quality at the former Contrecoeur dump. Since previous surveys were conducted in the fall (September-November), it is suggested that the next follow-up activity in the spring (May or June 2018) be carried out in order to complete the environmental profile of the site and to verify the water quality, underground and surface in other climatic and hydrogeological conditions.
- Sampling of surface water in the ditch along the Ruisseau Rank, upstream of the former dump.
- Repair or replace damaged surface water stations, if applicable.
- Surface water level elevation measurement stations located in the back half of the site that could not be surveyed (GPS) due to interferences with the vegetation cover.
- Measure biogas from wells installed in residual materials (eg PO-16-09, PO-16-13 and PO-16-17).

### **GROUPE HEMISPHERES. 2017**

In 2017, PWGSC has retained the services of Groupe Hemispheres to conduct a baseline study of the areas affected by the activities of the former landfill.

Groupe Hémisphères was mandated to conduct wildlife and plants surveys in order to furnish a better understanding of the sensitive biological components in a habitat restoration scenario.

On-site inventoried ecosystems are varied and include herbaceous uncultivated land, shrub uncultivated land, arborescent uncultivated land, young deciduous forest, mixed forest, fens, and treed swamps. No species at risk flora have been identified. As for invasive alien plant species, eleven colonies of European reed were identified, and purple loosestrife was found in a temporary pond.

During avifauna survey, 93 species of bird were surveyed. Three species at risk were potentially breeding on site: Eastern Wood-Pewee, Wood Thrush and Canada Warbler. The other species at risk were seen in migration or while flying over site which are Barn Swallow, Bobolink and Rusty Blackbird.

During herpetofauna surveys, two species of snakes were found (common garter snake and red-bellied snake). Five species of anurans were also surveyed (spring peeper, gray

tree frog, wood frog, green frog and American toad) while four species of salamander were observed (blue-spotted Salamander, red-backed salamander, red-spotted newt and four-toed salamander, a species likely to be designated threatened or vulnerable under Quebec legislation).

Trapping of small mammals was conducted but no species at risk were encountered. However, 28 specimens of three species were surveyed (*Peromyscus* mouse sp., southern red-backed vole and northern short-tailed shrew).

Search for monarch butterfly larva was successful while at least ten larvae were found in milkweed colonies. Monarch butterfly is considered of special concern under the SARA.

No fish were caught in the artificial ponds and in ditches during the fish campaign but eleven species of fish were captured in "northern ditch". However, no species at risk were found while conducting fish and fish habitat survey. Eight homogenous stream segments were characterized in the three ditches and in Ruisseau Laprade.

### **SNC-LAVALIN INC. 2018**

The available environmental characterizations have allowed establishing a conceptual model of the Site in which the large stockpile of residual materials represents an active source of contamination. This embankment essentially consists of automobile fluff but also contains various residual materials. It is covered with a soil layer with an average thickness of about 0.4 m but thinner in some places and sometimes absent. This layer of low permeability soil enables a runoff of precipitation to the ditches draining the Site. Part of the precipitation water, however, penetrates the stockpile and is loaded with organic and inorganic contaminants found there. The water present in the waste thus showed concentrations that exceeded the applicable criteria for several groups of contaminants (petroleum hydrocarbons, PAHs, HAMS, PCBs, metals, anions and dioxins & furans). This water is resurgent in the ditches of the Site. During the three ditch water sampling campaigns (Nov 2015, Sept and Nov 2016), however, ditch water quality only exceeds the applicable criteria for metals in most samples and for dioxins and furans in two samples. Concentrations of other organic contaminants were generally not detected. Similarly, the bottom of the drainage ditches is essentially contaminated by metals. The soil covering the waste stockpile generally contains traces of residual materials and, as a result, has a higher or lower contamination of metals and occasionally organic contaminants (HP, PCBs and dioxins and furans). Surface soils, both within the footprint of the stockpile and outside of it, have many concentrations over the criteria for boron, chromium and nickel suspected of being naturally occurring. Apart from these concentrations, a single arsenic concentration exceeds the criteria applicable outside the waste dump. Under the stockpile, contamination of the natural soil with organic and inorganic contaminants confirms that contaminants are migrating from the waste. However, the clayey nature and the high thickness of this natural soil layer acting as aquitard greatly limits the vertical progression of contaminants.

The prior risk assessment to human health has hitherto been based on the assumption that the Site remains accessible to the public and that exposure of people with the most contaminated surface soils, including uncovered residual materials, may be frequent. On this rather conservative basis, a potential risk to human health is associated with the exposure of people frequenting the Site to contaminants in surface soil in concentrations above the criteria established for direct contact or for inadvertent soil ingestion for residential use (As, Cd, Cr, Co, Cu, Mo, Ni, Pb, PCB, dioxins & furans). However, considering the criteria established for an industrial use for which the exposure scenario seems closer to that which may occur on the site, and considering exposure concentrations that could be retained closer to central trends than to maximum, it seems likely a more in-depth assessment of the elements of uncertainty makes it possible to significantly reduce or even exclude the identified potential risk for human health. A potential risk through direct contact with the materials is also identified for people who would have to work in excavation. No other exposure of individuals to contaminants through groundwater, surface water or sediments from ditches is considered significant. In the event of the implementation of a waterproof cover on the embankment of residual materials as part of a remediation of the Site, most of the potential risk to human health currently identified would be eliminated due to the absence of possible route of exposure to contaminated materials in the stockpile. The potential risk associated with natural soils outside the dump is associated with only a few exceedances of criteria, some of which could be of natural origin. In the case of the choice of a surface water pump and treat process as a remediation method, the potential for risk would be similar to that currently prevailing and would benefit from a more in-depth assessment of the elements of uncertainty. At the request of PWGSC, the risk assessment did not address off-site receptors as compliance with regulatory values was deemed to prevail.

The prior ecological risk assessment has so far been based on a partial description of the site's biological environment, which consists essentially of a wasteland in which no information indicates the presence of a special-status species. A complementary inventory must, however, be performed to specify whether certain suitable habitats shelter or not some special-status species (being realized by Groupe Hemispheres during this study). Conversely, a large portion of the wasteland is occupied by the common reed designated as invasive alien species. Portions of the Site are wooded, as is the entire area south of the Site, and thus represent an ecological environment that appears to be of greater value than the Site. In addition, neither the artificial ponds nor the drainage ditches on the Site are considered to be fish habitats. Only the stream along the northern limit of the Site is a fish habitat, although it is considered very poor. In this context, the assessment attributed to the Site's biological environment a level of protection comparable to that of a residential setting or a park. On this basis, a potential risk is essentially associated with the exposure of ecological organisms to metallic contamination (As, Ba, Cd, Cr, Cu, Sn, Mn, Mo, Ni, Pb, Se, Zn) of surface soil, ditch sediments as well as ditch water. In the event of the establishment of a waterproof cover on the stockpile of residual materials in the context of a remediation of the Site, a large part of the potential of risk to the environment currently identified would be eliminated because of the absence of possible route of exposure to contaminated materials in the dump. This cover would also prevent the infiltration of precipitation water into the waste and thus the resurgence of contaminants in the ditch water. Potential risk in relation with the exposure of ecological receptors to the surface water of the site would

therefore no longer be expected. The potential risk associated with natural soils outside the stockpile is associated with several exceedances of criteria, many of which (Cr and Ni) could however be of natural origin. In the case of the choice of a surface water pump and treat process as a method of remediation, the potential risk would be similar to that currently prevailing on the Site and would benefit from a more in-depth evaluation of the elements of uncertainty.

## **2.0 REQUIRED SERVICES (RS) AND ADDITIONAL SERVICES (AS)**

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The ultimate goal is to ensure that the construction work that will be done on the former Contrecœur landfill, by a specialized contractor retained by PWGSC in a separate mandate, address the environmental issues of the site, and meet both the specifications of the remediation and/or management plan (Plans & Specifications) and applicable regulations that will be formulated for the by the Consultant selected in this mandate.

In addition, the Consultant will be responsible for providing a support role during the preparation of the tender documents and the bidding period, and for the environmental monitoring of the construction work.

### **2.1 Description of work that is part of this mandate**

#### ***RS 3/ RS 4 - DESIGN - FINALIZATION OF THE REHABILITATION OR MANAGEMENT PLAN & PLANS AND TECHNICAL SPECIFICATIONS PREPARATION***

##### **Objective**

The Consultant will have to further develop the remediation or management plan based on existing data and integrate the most recent data (especially those of the ongoing risk assessment) to determine the final remediation option retained for the site. The Consultant may be required to prepare the plans & specifications, drawings and tender documents as well as the final cost estimate for the project.

##### **General**

In collaboration and discussion with PWGSC, the Consultant will identify the best environmental management option for the site for the Government of Canada. PWGSC will then confirm in writing, if applicable, which of the proposed options is to be developed by the Consultant for the plans & Specifications preparation. If modifications are necessary, describe all changes to be made, analyze the impact on all project components and resubmit everything for approval, if necessary.

The mandate may include the following activities at this phase:

- Expand and clarify design elements that can influence project development;
- Provide advice and formulate recommendations on project planning to achieve the most efficient and economical sequence of work;
- Schedule, when needed, meetings to discuss and confirm PWGS's needs;
- Support PWGSC to present the project to government or local authorities where necessary;
- Analyze project's feasibility and give its opinion on the work execution process and its duration;
- Identify and calculate potential risks and making recommendations for dealing with unforeseen situations to minimize negative cost impacts;
- Based on all available information at this stage, develop a calendar of benchmark events to be considered;
- Conduct an ongoing review of all acts and regulations during project planning;

- Produce the final version of the remediation plan;
- Produce final versions of plans and specifications signed and sealed by an engineer;

The mandate may more specifically include the following activities:

- Expand and clarify the objectives;
- Obtain certification of studies, as needed;
- Draw up a list of all sections to be consulted in the National Master Specification, if applicable and produce a complete specification encompassing options with regard to sustainable development and greening;
- Prepare minutes of meetings and distribute them to the participants;
- Update the project's timetable and cost forecast;
- Prepare a presentation to the client at the 99% document completion stage on the specifications;
- If needed, approach the MDDELCC to obtain approval for the remediation plan, and,
- If needed, approach the competent authorities (ECCC, DFO, HC, etc.).

During planning, the Consultant must incorporate environmental protection and sustainable development components from the following incomplete list:

- Develop the design and evaluate options focusing on beneficial environmental strategies (use of SD tool); and
- Integrate the results of the screening environmental assessment conducted under the CEAA, and environmental evaluation of the project, for example, erosion and sediment control (reduction of TSS).

For these required services, deliverables are:

- ✓ Remediation or management plan, and;
- ✓ Plans and technical specifications for bidding, updated to:
  - 60 % french only;
  - 99 % bilingual, but in two steps, and,
  - 100 %, which incorporates all revisions required as a result of the 99% version and is intended to provide PWGSC with a complete version of the Tender Execution Documents and includes:
    - Complete set of final English and French shop drawings;
    - Complete sets of final English and French specifications.

### **Official languages requirements:**

Construction Documents must be submitted in both official languages as required.

- The Consultant shall prepare all Construction Documents in Canada's two official languages;
- Both official languages are considered to be on an equal footing and neither shall be considered a translation of the other;



- The Consultant is responsible for the accuracy and comprehensiveness of the texts, as well as consistency within documents; and
- It is standard practice to produce a single set of drawings (originals) on which written information is shown in both languages, and separate written documents for each language for tendering, records drawings, and operating and maintenance documentation.

## ***RS-5 – TENDER PROCESS & CONTRACT AWARD***

### **Objective**

The purpose of this phase is to obtain and evaluate bids from qualified Contractors to construct the project as per the Tender Documents, to evaluate them, and to award the construction contract according to government regulations.

This phase aims to

PWGSC will handle most of this part of the project. However, the Consultant will be involved in the preparation of some elements, notably evaluation of the received proposals and replies to bidders' questions received during the bidding process.

### **General**

- Attend information meetings for Bidders e.g.: Site visit during bidding period;
- Prepare addenda based on questions raised during bidding period for distribution by the Project Manager (PWGSC);
- Provide all documents required to conduct the tender call for Contractors. This requires that all documents be of good quality and be coordinated among the disciplines. This responsibility falls to the Consultant;
- Assist in bid evaluation by providing advice on the following:
  - The determination of proposals' evaluation criteria in the tender document;
  - The completeness of bid documents in all respects;
  - The technical aspects of the bids;
  - The effect of alternatives and qualifications that may have been included in the bid;
  - The Bidders' ability to undertake the full scope of work; and
  - The availability of adequate equipment to carry out the work;
- If PWGSC decides to re-tender the project, provide advice and assistance to the Project Manager;
- Examine and report on any cost and schedule impact created by the issue of tender/contract addenda, and;
- Translate (English-French) questions/answers during the bidding period.

## **RS-6 - MONITORING WORK**

### **Objective**

This phase aims to make sure that the work performed by the contractor hired by PWGSC complies with the specifications of the remediation and/or management plan, the plans and technical specifications as well as the applicable regulations.

### **General**

The scope of the work for the selected Consultant is outlined below, for information purposes:

- During project implementation, act as a representative of PWGSC to the extent provided in this document;
- Review and analysis of the management plan for excavated material provided by the contractor and the environmental protection plan;
- Review of the contractor's occupational health and safety plan and preparation of comments and recommendations for PWGSC regarding approval of the occupational health and safety plan;
- Identify and justify construction monitoring requirements (full or part time);
- Monitoring of the remediation work to determine if they comply with the contract documents;
- Preparations for, chairing of and drafting of minutes of start-up and follow-up meetings;
- Keep PWGSC aware of the progress and quality of the work, and report any errors and deficiencies in the work identified during the on-site examination;
- Determine the amounts due to the contractor based on the progress of the work and certify the payment of these amounts to the contractor (review and approval of progress payment claims);
- If needed, conduct a survey to validate quantities;
- Interpret the requirements of the contract documents;
- Provide advice on all aspects of project costs during the project;
- Notify the Project Manager of any possible changes to the scope of work during project implementation;
- Revise the documents submitted by the contractor;
- Draft change orders to be distributed by the Departmental Representative and justify them;
- Follow the analytical results obtained by the contractor, collect confirmation samples as needed and interpret these results;
- Draft fieldwork reports to assess the quantities applicable for payment; and,
- Indicate any changes or substitutions of material / equipment on the project's archival records.

## **Details**

### **Briefing Meetings prior to construction**

- Immediately after Contract award, arrange a briefing meeting with the Contractor and the Departmental Representative.
- The Consultant shall prepare the minutes of the meeting and distribute copies to all participants and to other persons agreed upon with the Project Manager.
- Call site meetings as frequently as required (at least once every two weeks), commencing with the construction briefing meeting.
- Prepare minutes of the meetings and distribute copies to all participants. Immediately after contract award, convene an information meeting with the contractor and departmental officials.

### **Project schedule**

- Immediately after contract award, obtain the project schedule and ensure proper distribution;
- Verify that the works are performed in accordance with the approved schedule, take the necessary measures to ensure that the schedule is respected and submit a detailed report to the Ministry regarding delays;
- Keep a detailed register of the causes that generate these delays; and,
- Make every effort to assist the contractor to avoid delays in the project schedule.

### **Extension of time limits**

- Only the Ministry can approve a request for an extension of time. The project manager will issue a written authorization to this effect.

### **Cost breakdown**

- Obtain from the contractor a detailed cost breakdown, provided on a standard PWGSC form, and submit it to the Project Manager with the first partial payment claim.

### **Project Schedule**

- Once the construction contract is awarded, obtain the Project Schedule from the Contractor. This schedule shall be detailed enough for use in monitoring the commissioning component, shown separately; it shall be distributed appropriately.
- Monitor the approved construction schedule, take necessary steps to ensure that the schedule is maintained and submit a detailed report to the Departmental Representative concerning any delays.
- Keep accurate records of causes of delays and associated costs.
- Make every effort to assist the Contractor to avoid delays with respect to the Project Schedule, in particular by acting proactively and with agility and by providing the Contractor with clear, accurate answers that are consistent with requirements.

### **Time Extensions**

- Only the Department can approve a request to extend a deadline. Approval will be issued in writing by the Project Manager.

### **Cost Breakdown**

- Obtain from the Contractor a detailed cost breakdown on standard PWGSC form and submit to the Department with the first Progress Claim.

### **Subcontractor Changes**

- The Contractor is required to use the Subcontractors listed on the tender form unless the Department authorizes a change. Changes are only considered when they involve no increase in cost. Review all requests for changes of Subcontractors, and submit recommendations to the Project Manager.
- When Subcontractors have not been listed on the tender form, obtain the list from the Contractor not later than 10 working days after the date of award.

### **Labour Requirements**

- The Contractor is bound by the Contract to maintain competent and suitable workers on the project and to comply with the Canada Department of Labour – Labour Conditions. The Consultant shall inform the Department of any labour situations or working conditions that appear to require corrective action by the Department.
- The Consultant shall ensure that a copy of the Labour Conditions for the Contract is posted in a conspicuous place on site.

### **By-law Compliance**

- Ensure that construction complies with applicable municipal by-laws and regulations.
- Matters pertaining to the Department of Labour shall be referred to the Consultant.

### **Construction Safety**

- All project sites that are occupied by federal employees during construction are subject to the Act and the Canada Occupational Health and Safety Regulations as administered by Health and Welfare Canada.
- In addition to the above, the Contractor must comply with municipal safety laws and regulations, and with any instructions issued by the officers of authorities having jurisdiction relating to construction safety, and
- Assume the role of General Contractor when designated.

### **Site Supervision Services**

- Provide non-resident construction inspection services.
- Ensure compliance with Contract Documents;
- Provide services of qualified personnel who are fully knowledgeable with technical, environmental and administrative requirements of project;
- Establish a written understanding with Contractors as to what stages or aspect of the work are to be inspected prior to being covered up;
- Ensure that the work is performed in accordance with the drawings and specifications.
- Assess quality of work and identify in writing to the Contractor and to the Departmental Representative all defects and deficiencies observed at time of such inspections;

- Prepare a Site Visit Note for every visit;
- Any list of directives, clarifications or deficiencies shall be issued in writing to the Departmental Representative;
- Assess quality of work and identify in writing to the Contractor and to the Departmental Representative all defects and deficiencies observed at time of such inspections;
- Review and analyze the contractor's cuttings management plan and the environmental protection plan;
- Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project; and
- Any list of directives, clarifications or deficiencies shall be issued in writing to PWGSC.

### **Clarifications**

- Provide clarifications on drawings and specifications or site conditions, as required in order that the project not be delayed.

### **Progress Reports**

- Report to the Departmental Representative regularly on the progress of the work.

### **Inspection and Testing**

- Prior to the tender call for Contractors, provide Departmental Representative with recommended list of tests to be undertaken, including on-site and factory testing.
- When Contract is awarded, assist Departmental Representative in briefing testing firm on required services, distribution of reports, communication lines, etc.
- Review all test reports and take necessary action with Contractor when work fails to comply with Contract.
- Immediately notify Project Manager when tests fail to meet project requirements and when corrective work will affect schedule.
- Assist Departmental Representative in evaluating testing firm's invoices for services performed.

### **Construction Changes**

- The Consultant does not have authority to change the work or the price of the Contract. However, the Consultant will be required to submit to the Department preliminary estimates of the costs of the required changes and will provide the notice of planned changes and change orders.
- Analyze requests for modifications and submit to the Departmental Manager recommendations concerning the amount and relevance of modifications.
- The Contractor does not have the authority to approve modifications.
- Changes that affect cost or design concept must be approved by the Departmental Representative;
- Upon Departmental Representative approval, obtain quotations from the Contractor in detail. Review prices and promptly forward recommendations to the Departmental Representative;

- The Department will issue Consultant-prepared Change Orders to the Contractor, and a copy to the Consultant;
- Change Orders will cover all changes, including those not affecting the cost of the project; and,
- The practice of “trade-offs” is not allowed.

### **Contractor's Progress**

- Each month, the Contractor shall submit a Progress Claim for work and materials as required in the Construction Contract. Review requests for periodic payments and make appropriate recommendations.
- The claims are made by completing the following forms where applicable:
  - Request for Progress Payments;
  - Cost Breakdown for Unit and/or Combined Price Contract;
  - Cost Breakdown for Fixed Price Contract;
  - Statutory Declaration Progress Claim; and
  - Review and sign designated forms and promptly forward claims to the Department for processing.
- Claims must be reviewed and approved by the Consultant for payment by the Department Submit with each progress claim:

### **Acceptance Board**

The Consultant shall inform the Departmental Representative when satisfied that the project is substantially completed. The Consultant shall ensure that its representative, the representative of its Sub-Consultants, Resident On-Site Reviewer, Contractor and major sub-trades representatives shall form part of the Project Acceptance Board and attend all meetings as organized by the Departmental Representative

### **Interim Inspection**

The Consultant shall inspect the work and list all unacceptable and incomplete work on a designated form. The Consultant shall accept the project from the Contractor subject to the deficiencies being corrected and incomplete work listed and priced.

### **Interim Certificates**

Payment requires completion and signing, by the parties concerned, of the following documents:

- Interim Certificate of Completion;
- Cost Breakdown for Fixed Price Contract;
- Cost Breakdown for Unit and/or Combined Price Contract;
- Inspection and Acceptance;
- Statutory Declaration – Interim Certificate of Completion; and
- Worker's Compensation Board Certificate.

Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to the Departmental Representative for processing.

### **Final Inspection**

Inform the Departmental Representative when satisfied that all work under the Contract has been completed, including the deficiency items on the Inspection and Acceptance form as a result of the Interim Inspection. The Departmental Representative reconvenes the Acceptance Board which makes a final inspection of the project. If everything is satisfactory, the Board issues its final acceptance of the Contractor's project.

### **Certificat d'achèvement définitif**

The final payment requires completion and signing, by the parties concerned, of the following documents:

- Final Certificate of Completion;
- Cost Breakdown for Fixed Price Contract;
- Inspection and Acceptance;
- Statutory Declaration – Final Certificate of Completion;
- Cost Breakdown for Unit and/or Combined Price Contract;
- Workmen's Compensation Clearance Certificate, if applicable; and
- Hydro Certificate, if applicable.

Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to the Departmental Representative for processing.

### **Deliverables :**

- Daily monitoring reports;
- Additional detail drawings when required to clarify, interpret or supplement the Construction Documents;
- Interim or/and Final Certificates;
- Warranty Deficiency List; and,
- Remediation report in attestable format according to section IV.2.1 of the *Loi sur la qualité de l'environnement* (LQE) in preliminary and final version.

## **2.2 Description of Additional Services (AS) that may be part of subsequent mandates**

The Additional Services task list is non-exhaustive and in no way limits the professional obligations of the Consultant, its Sub-Consultants and its Specialist Consultants to perform the required tasks for the purpose of fulfilling the mandate of the project.

### **AS 1 - GROUNDWATER AND SURFACE WATER QUALITY MONITORING**

As an option in this mandate, the Consultant may be required to perform the following tasks:

#### **Groundwater**

- Conduct groundwater quality monitoring campaigns;
- Measure piezometric levels;

- Purge observation wells on the site until physico-chemical parameters are stabilized;
- Collection of water samples in these wells; and,
- Proper disposal of pumped water.

### **Surface water**

- Conduct surface water quality monitoring campaigns;
- Sample surface water at stations
- Measure water levels and water flowrates in ditches and creeks bordering the former dump site.

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### **Analytical parameters for groundwater and surface water**

Analytical parameters include, but are not limited to, metals (Al, As, B, Ba, Cd, Cr, Cu, Fe, Mn, Mo, Na, Ni, Pb, Se, U, Zn) and other inorganic parameters, Chlorides, Fluorides, Sulphides, Ammonia Nitrogen, Cyanides, PAHs, VOCs, PCBs, DFs and SS.

The Consultant must consider the relevance of analyzing other parameters and justify any additional parameters selected. In such a case, PWGSC must approve the analyses in advance.

## ***AS 2 - COMPLEMENTARY ENVIRONMENTAL CHARACTERIZATION WORK AND OTHER RELATED WORKS***

Following the review of available documentation, in the event that information uncertainties are identified, further characterization or other environmental work may be required.

If applicable, a technical and financial service proposal will be sought from the Consultant.

The completion of this mandate will be in accordance with the specifications of this Request for Proposal, CSA-Z769-00 (R2010) and the federal and provincial documentation presented in section 3.0. A health and safety plan must be sent to PWGSC for authorization prior to the beginning of the work.



### 3.0 REFERENCES

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PWGSC wishes to draw the Consultant's attention to the recent release (May 2016) of a federal CCME soil characterization guidance, which references:

- Guidance manual for environmental site characterization in support of environmental and human health risk assessment (CCME, 2016)
  - o Volume 1 : Guidance Manual
  - o Volume 2 : Checklists
  - o Volume 3 : Suggested Operating Procedures
  - o Volume 4 : Analytical Methods

PWGSC also wishes to draw the Consultant's attention to the recent release (July 2016) of a provincial response guidance for soil protection and remediation of contaminated lands which is being implemented immediately following its publication and whose references are as follows:

- BEAULIEU, Michel. 2016. *Guide d'intervention - Protection des sols et réhabilitation des terrains contaminés*. Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques, ISBN 978-2-550-76171-6, 210 p.

Besides, the Consultant must perform the work in accordance with the applicable federal, provincial and municipal acts, regulations, codes, guides and standards, which include, but are not limited to, the following:

- *Canadian Environmental Protection Act*;
- *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*;
- *Fisheries Act*;
- Canadian Environmental Quality Guidelines;
- Canadian Drinking Water Guidelines (Health Canada);
- Canada-Wide Standards on Petroleum Hydrocarbons (PHC) in Soil (CCME);
- Canada-Wide Standards on Petroleum Hydrocarbons in Soil (PHC): Technical Supplement (CCME)
- Federal Approach to Contaminated Sites;
- Guidance Manual on Sampling, Analysis, and Data Management for Contaminated Sites, Volume I: Main Report (CCME, 1993);
- Guidance Manual on Sampling, Analysis, and Data Management for Contaminated Sites, Volume II: Analytical Method Summaries (CCME, 1993);
- *Environment Quality Act*;
- *Land Protection and Remediation Regulation*;
- *Regulation respecting the burial of contaminated soils*;

- *Regulation respecting hazardous materials*;
- *Regulation respecting the landfilling and incineration of residual materials*;
- Soil Protection and Contaminated Sites Remediation Policy (MDDELCC);
- Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites( June 2016);
- Guide d'intervention – Protection des sols et réhabilitation des terrains contaminés (MDDELCC, 2016)
- Guide de caractérisation des terrains (MDDELCC, 2003);
- Guide d'échantillonnage à des fins d'analyses environnementales, Cahier 1 - Généralités (MDDELCC, juillet 2008);
- Guide d'échantillonnage à des fins d'analyses environnementales. Cahier 3 - Échantillonnage des eaux souterraines (MDDELCC) Révision du 23 février 2012;
- Guide d'échantillonnage à des fins d'analyses environnementales, Cahier 5 - Échantillonnage des sols (MDDELCC) Révision du 5 février 2010 et addenda;
- Guide d'échantillonnage à des fins d'analyses environnementales, Cahier 8 - Échantillonnage des matières dangereuses (MDDELCC, Septembre 2008);
- Mode de conservation pour l'échantillonnage des sols (Centre d'expertise en analyse environnementale du Québec);
- Mode de conservation pour l'échantillonnage des eaux souterraines (Centre d'expertise en analyse environnementale du Québec);
- Liste des méthodes suggérées pour la réalisation des analyses de laboratoire (MDDELCC, 3<sup>e</sup> édition, mai 1999);
- Lignes directrices pour le traitement des sols par biodégradation, bioventilation ou volatilisation (MDDELCC, Novembre 1999);
- List of authorized treatment centres for contaminated soil (MDDELCC);
- List of authorized contaminated soil burial sites (MDDELCC);
- Lignes directrices relatives à la gestion de béton, de brique, d'asphalte issus des travaux de construction et de démolition et des résidus du secteur de la pierre de taille (MDDELCC, Juin 2009);
- La gestion des matériaux de démantèlement – Guide de bonnes pratiques (MDDELCC);
- Guide de valorisation des matières résiduelles inorganiques non dangereuses de source industrielle comme matériaux de construction (MDDELCC, 19 juin 2002);
- Workplace Hazardous Material Information System (WHMIS);
- Criteria for the Assessment of Sediment Quality in Quebec and Application Frameworks: Prevention, Dredging and Remediation (Environment Canada, 2007);
- Phase II Environmental Site Assessment, CSA-Z769-F00 (C2008).

In the event of omissions or contradictions between these requirements, the most stringent thereof will apply.

The Consultant must obtain from federal, provincial and municipal authorities the necessary permits to perform the work and must pay the fees thereof.

## **4.0 METHODOLOGY**

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The Consultant will act as a representative of PWGSC. There must be close co-operation between the Consultant and PWGSC in all decisions made, to ensure that the work proceeds smoothly.

### **4.1 Meetings and presentations**

Following the contract award, a start-up meeting must be held with all the project stakeholders. At this meeting, the Consultant must submit a work schedule and clarify the project; and prior to the meeting, the Consultant must draw up a list of clarifications and additional information required. The reports will be given to the Consultant at this meeting.

For tendering purposes, the following must at least be planned:

- A start-up meeting (PWGSC offices in Montreal);
- A site visit;
- Three presentations of results and developed options presentation, including one for Site Manager with minimal technical content (PWGSC offices in Montreal)
- Two follow-up meetings during the mandate (PWGSC offices in Montreal); and,
- A presentation with the partners (MDDELCC, Environment Canada and Climate Changes, Health Canada, Fisheries and Oceans, etc)

### **4.2 Fieldwork**

This section is intended to clarify the methodology of some fieldwork, and will apply in particular if the Consultant is performing Additional Services (AS) in the field.

#### **Site access**

The Consultant must have its own transportation, without support from PWGSC, and pay all travel costs. The project start date must be communicated to PWGSC as soon as possible. PWGSC must be notified 48 hours prior to any planned site visit. Keys are required to access the site.

The Consultant must possibly have 4-wheel drive vehicles for travel to and around the study site. The Consultant must have a track-mounted drilling rig in order to reach the locations where boreholes are to be drilled.

#### **Location of infrastructure**

Before beginning the characterization work, the Consultant will be responsible for locating all underground infrastructure (e.g. Info-Excavation).

## **Materials and equipment**

The Consultant must provide all of the materials and equipment required to perform the work and must ensure that this equipment is in proper working order.

The equipment used by the Consultant's subcontractor(s) must comply with the guidelines set out in the guides listed in Section 3. This equipment must be able to sample soils, groundwater, surface water and sediment.

## **Exploration trenches**

All necessary precautions will have to be taken during trench-digging so as not to damage any barrels or containers that might be encountered while carrying out the work. The anticipated depth of exploration trenches is 3 to 4 meters but could vary depending on the areas of the site. In any case, the trenches will have to be dug down to native soil (or the limits of the excavation equipment used) and allow its sampling and description to a depth of one meter.

The description and sampling of the soils / residual materials observed must be done continuously in the trenches.

Trenches should be backfilled with excavated material and compacted in 30 cm increments without compactness testing. The surface of the trench once backfilled must be stable and equal to the surrounding soil.

## **Drilling of boreholes**

The Consultant must have a track-mounted drilling rig given the nature of the study site. To prevent the entrainment of contaminants to other geological horizons, it is important to avoid injecting a large amount of water during the drilling of boreholes. The use of drilling mud is to be avoided. If water must be injected, the volumes of water used must be recorded and presented in the report and the water used must be removed during well development.

It should be noted that there is no source of water at the site.

In addition to the usual procedures for cleaning sampling equipment, drilling equipment must be steam-cleaned or pressure-cleaned between drillings to prevent cross-contamination.

## **Monitoring wells**

The installed monitoring wells must have a diameter of 2 inches (CPV tubing). The annular space of the wells must be sealed with bentonite/cement-bentonite grout injected from one foot above the screen to the land surface. A casing centralizer must be used in deep wells. In addition, there must be an aluminum locking cap attached to the HDPE protective casing at the top of the well.

Finally, there must be an aluminum locking cap attached to the HDPE protective casing at the top of the well. The Consultant must provide the locks.

### **Monitoring well development**

Well development must be done with a mechanical actuator and a surge block. The volume of water injected that was not recovered during drilling must be pumped/removed from the well. After well development is complete, the pumped water must be clear. The volume of water pumped during development of the wells must be recorded in the report.

### **Water level and ditches flowrates measurement**

Measurements of groundwater and free phase (dense and light) levels must be taken prior to sampling, at least 24 hours after well development.

Level of surface water must also be measured to validate the flow directions. The location of the surface water measurement point will be used to evaluate the elevation of the surface water level in the ditch using the precise topographic survey data produced by PWGSC.

If required, the Consultant will be required to measure flow rates in the ditches and / or creek of the site.

Measurement of water levels and flows will be scheduled over consecutive days.

### **Permeability testing**

Rising head permeability tests must be conducted to determine the hydraulic conductivity of each stratigraphic unit. These tests must be performed using a pump and a submersible datalogger to detect changes in water level over time.

### **Soil and waste sampling**

The soil and waste must be sampled continuously.

The sample collection and preservation methodology must comply with the guidelines set out in the guides listed in Section 3.0. The soil sampling methodology, for instance, must take into account, but not be limited to, the stratigraphy encountered, organoleptic indicators of contamination, and stratigraphic unit thickness (separate sampling of stratigraphic units, maximum thickness represented by a 1.0-metre sample, except other indications (eg: need for smaller horizon for surface and subsurface risk analysis)).

Measurements of volatile organic compounds (VOCs) must be taken using a gas detector (**PID**) on all soil samples collected.

### **Groundwater sampling**

For groundwater sampling, allow at least 24 hours following the development of the observation wells before sampling. Groundwater sampling should be on consecutive days.

Measurements of levels of groundwater and free-phase products (dense and light) must be taken using an interface probe prior to sampling.

The Consultant is required to use the low-flow method for groundwater sampling (flowrate < 0.2 L/minute). The pumping method must be compatible with volatile organic compound (VOC) sampling. The physico-chemical parameters to be measured at the site are as follows: pH, temperature, conductivity, dissolved oxygen, turbidity and oxidation-reduction (redox) potential. The methodology described in the MDDELCC sampling guide must be used. The Ground Water Sampling Log presented in Figure 2 of the USEPA document "*LOW-FLOW (MINIMAL DRAWDOWN) GROUND-WATER SAMPLING PROCEDURES (USEPA EPA/540/S-95/504)*", or its equivalent, must be completed and appended to the report for each well sampled.

### **Management of drilling water, washing water, well development water and sampling water**

Washing water, water injected during drilling process and recovered and water pumped from the wells may not be discarded untreated or without first being sampled and submitted for chemical analyses to demonstrate that it can be safely discharged into the environment. In the proposed price, the Consultant must make provision for treatment of the water on site **or** factor in the cost of transport and disposal of the pumped water. A storage method for the water must also be specified.

### **Sample preservation and transportation**

The sample preservation methodology must comply with the guides listed in Section 3.0. The Consultant must ensure that the integrity and quality of the samples are preserved during transportation to the laboratory. Only samples requiring analysis are to be sent to the laboratory. The Consultant is responsible for preserving the other samples in a proper manner.

### **Sample nomenclature**

Samples must be identified as follows to ensure temporal continuity. For example, the monitoring wells will be identified as PO-18-XX, where 18 indicates the year, PO indicates monitoring well and XX is a sequential number. Use TR or TE for exploratory trenches, ES for surface water and SE for sediment.

### **Site restoration**

The Consultant will be responsible for cleaning the site as the work progresses. No waste may be left at the site. After the fieldwork is completed, the site must be restored to its

original condition, to the satisfaction of PWGSC, on the same day that the sampling is done.

### **Location of soil borings**

All sampling points (monitoring wells, trenches, surface water and sediment) must be surveyed and graded. The coordinates of each point must be transmitted in MTM zone 8, NAD 83 (SCRS). The precision of the co-ordinates must be 0.5 m in X and Y, and 0.001 m in Z.

### **Quality assurance and control**

During all stages of the project, the Consultant must implement a quality assurance/quality control (QA/QC) program to ensure the quality and reliability of the data obtained. This program must be applied to the characterization project, for both field sampling and laboratory work. It must include duplicate sampling for quality control, with at least 10% of the samples submitted for chemical analyses being duplicated. Field blanks for volatile compounds must be prepared once a day during groundwater sampling activities. A trip blanks must be included with each shipment of samples to the laboratory.

### **4.3 Classes A to C cost estimates**

PWGSC already has an order of magnitude of the total project costs for each option on the basis of the information available at the time class D estimate,  $\pm 30\%$ ). The estimate is based on historical financial data for similar works. To the extent possible, it is necessary to take into account all factors that modify the costs.

The estimation process has been used to establish the indicative estimate required by Treasury Board for preliminary project approval.

During the preparation of plans & technical specifications, the consultant will have to prepare Class A to class D cost estimate according to the following margins of error:

<b>DEFINITION</b> Preparatory studies	<b>Class C cost estimate</b> Margin of error : from 15 % to 20 %
<b>DEFINITION</b> Plans and specifications detailed at 60%	<b>Class B cost estimate</b> Margin of error : from 5 % to 15 %
<b>DEFINITION</b> Plans and specifications detailed at 100%	<b>Class A cost estimate</b> Margin of error : 5 %

The tasks to be performed include the following:

- Prepare estimates with a detailed breakdown based on project briefs and preliminary concepts or other provisional information;
- Provide advice and recommendations on project planning in order to achieve the most cost-effective project sequence;



- Identify and quantify potential risks and make contingency recommendations in order to minimize negative cost impacts;
- Identify, forecast and analyze project-related issues, including possible market shortages and potential price fluctuations; and,
- Include contingency and administration fees and profits in the estimates.

## 5.0 OCCUPATIONAL HEALTH AND SAFETY

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This section will apply in the event of the Consultant performing Additional Services including fieldwork.

In accepting this contract, the Consultant agrees to assume all of the responsibilities normally assigned to the principal contractor under the *Quebec Act respecting occupational health and safety* and to supervise the worksite. Before beginning the work, the Consultant must do the following:

- Regardless of the number of workers assigned to the worksite, send the departmental representative a safe work plan (**Occupational Health and Safety Plan\***) and a mechanical inspection certificate for the machinery used at the site;
- Ensure that workers have received the training and information they need to perform the work safely, and that all necessary tools and protective equipment are available, comply with the applicable standards, statutes and regulations, and are used;
- Comply at all times with the *Quebec Act respecting occupational health and safety* and the Quebec Safety Code for the Construction Industry;
- Inform workers that they have the right to refuse to perform any work that involves a hazard to their health or safety;
- Mark off, barricade and control access to the work area.

In the event of an unforeseen incident, the Consultant must take all necessary measures, including cessation of work, to protect the health and safety of workers and the public, and must contact the departmental representative promptly.

\*The Occupational Health and Safety Plan will be specific to the site and the work to be carried out. The Consultant will be responsible for implementing the plan during the performance of the work. The Occupational Health and Safety Plan must be submitted to the PWGSC representative one week before the work is slated to begin. A version signed by the subcontractors must be kept at the site while the fieldwork is under way and must be sent to the PWGSC representative after the fieldwork is completed.

## **6.0 DELIVERABLES**

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### **6.1 Description and reproduction of deliverables**

Deliverables related to the Required Services (RS) include :

- 1) a report on the evaluation of remediation / site management options,
- 2) the plans and specifications related to the call for tenders for the environmental remediation works (60%, 99% and 100%), and
- 3) a report of environmental remediation of the site.

If Additional Services (AS) are required in subsequent mandates, three types of deliverables must be prepared:

- 4) a characterization and Health & Safety plan specific to the site and works,
- 5) a monitoring report on groundwater quality, and
- 6) a complementary environmental characterization report.

The complementary characterization report must address the site issues and incorporate data from previous studies.

The preliminary version of each deliverable must be submitted in electronic format including all annexes and plans. One (1) hard copy of the final version of the report, incorporating comments from PWGSC, must be submitted as well as two (2) compact discs containing a copy of the final report in electronic format (documents in native format and .pdf). The reports must be written in good quality French and printed on both sides of the paper. All the drawings of the consultant must be CAD drawings and must be submitted in CAD format. Photographs and figures must be in color for reports. All material (maps, photographs, plans, etc.) acquired under this mandate remains the property of PWGSC and must be submitted with the final report.

The deliverables must contain pertinent information with respect to the following (without being limited thereto):

### **6.2 Evaluation of remediation/management options**

#### Executive summary (in French and English)

##### Description of site

- History of work and summary of previous work;
- Summary of the environmental issues.

##### Methodology

- Description of the method used to select the options; and
- Summary of issues specific to PWGSC (which will be discussed at a meeting).

#### Presentation of remediation and/or management options

## Discussion and selection of preferred option

## Conclusions and recommendations

### **6.3 Plans and specifications for environmental remediation works**

For the preparation of the technical plans and specifications for the call for tenders, consider the following points:

- The quote may be prepared according to the format and requirements of the new DDN numbering format, but not necessarily. This item will be discussed in advance with PWGSC;
- At each step, documents must be submitted electronically to PWGSC;
- Final Submission: One (1) complete set of (reproducible originals) original drawings and specifications signed and sealed, class A estimate, electronic copies of .dwg format drawings, as well as hard and electronic copies quote;
- Submission documents (plans and specifications) will be in French and English;
- Drawings prepared on AutoCad should be presented in an appropriate format (usually A1, A0 or B1);
- Consultants will be required to adhere to the most recent version of PWGSC AutoCad Computer-Aided Design (CADD) Instructions for Design; and
- The drawings will be in metric system.

The following deliverables must be submitted:

#### **Phase I - Assessment, Analysis and Concept**

- Conformity assessment including:
  - Risk analysis
  - Photos, sketches and diagrams
  - Concept and class C estimate

#### **Phase II - Design, Works and Risk Management**

- Plans & Quotes 60% and 100%
- Risk Management Plan
- Schedule of work
- Class B and class A estimates for the works
- Certification of works
- Plans as built

#### Operating Manual (if required)

- Complete 60% and 100% management plan including:
  - Emergency measure plan

- Inventory and registration form
- Forms and registers
- Maintenance program
- Plans as constructed

#### **6.4 Environmental remediation report**

The consultant will be required to produce a remediation report at the end of the remediation work. The remediation report shall contain the relevant information with respect to, but not limited to, the following:

##### Executive summary (in French and English)

###### Introduction

- Objectives and scope of work.

###### Site description

- History of work and summary of previous work;
- Summary of the environmental issues.

###### Methodology and description of work

- Physical characteristics of the work area (stratigraphy, presence of debris);
- Health and safety;
- Remediation work related to the retained option;
- Quality control of contractor's surveying;
- Analytical program;
- Quality assurance and quality control program (QA/QC);
- Mitigation measures.

###### Analytical results

- Evaluation criteria;
- Description and analysis of results (including analytical certificates);
- QA/QC program results and interpretation.

###### Balance of quantities

- Excavated materials;
- Materials disposed of off site;
- Borrow materials (if applicable).

###### Conclusions and recommendations

###### References

###### Figures, Tables and Appendices

## **6.5 Characterization and Health & Safety plan**

A characterization plan for the site under study must be submitted to PWGSC according to the schedule included in the following section. This plan shall include and present in figures the location of the proposed work (trenches, boreholes and observation wells) and their justification. The plan must be approved by PWGSC prior to the beginning of the work. All changes to the characterization plan based on actual field conditions will be communicated to the PWGSC Project Authority and approved by PWGSC prior to proceeding with the work.

In addition, at least one week before the start of the work, the Consultant must send the Departmental Representative for approval a work safety plan (site-specific health and safety plan including a procedure in the event of an accident, see section 5.0).

## **6.6 Groundwater and surface water quality monitoring report**

Executive summary (in French and English)

Introduction

Site description

Methodology

- Health and safety;
- Sampling methodologies and sample nomenclature;
- Analytical program;
- Quality assurance and quality control program;

Analytical results

- Evaluation criteria;
- QA/QC program results.

Results interpretation

- Discussion on groundwater quality evolution;

Conclusions and recommendations

References

Figures – At a minimum:

- A general site map, and
- a map/maps showing schematic representation of the analytical results obtained.

Tables – At a minimum:

- Compilation tables of analysis results for groundwater samples, including a summary table of previous results, in comparison to the applicable criteria;
- Compilation tables of analysis results for surface water samples, including a summary table of previous results, in comparison to the applicable criteria; and,
- A table presenting the results of the quality control program must also be provided.

Appendices – At a minimum :

- a photographic report;
- analysis and quality control certificates
- Water Sampling Log.

## **6.7 Environmental characterization**

Executive summary (in French and English)

Description of site

- History of work;
- Description of environmental issues.

Methodology

- Location of utilities and underground infrastructure;
- Occupational health and safety;
- Characterization plan;
- Soil borings and installation of monitoring wells;
- Sampling methodologies and sample nomenclature;
- Analysis program;
- Grading and surveying;
- Quality assurance and control program.

Physical characteristics of the study site

- Stratigraphic context;
- Hydrogeological context;
- Direction of prevailing winds;
- Demonstration of percentage of waste and soil in smelting residues;
- Indicators of contamination.

Analysis results

- Interpretation criteria selected (federal and provincial);
- Soil quality (surface layer and beneath residues);
- Quality of smelting residues and treatment testing;
- Groundwater quality;
- Surface water quality;
- Sediment quality
- Results of QA/AC program.

Interpretation of results (at both federal and provincial levels)

- Extent of soil contamination in relation to various contamination levels;
- Extent of contamination of smelting residues;
- Extent of groundwater contamination;
- Extent of surface water contamination;
- Extent of sediment contamination;
- Presentation of the conceptual model;
- Discussion of the potential impact on neighbours' water supply wells (drinking water and for agriculture);

Conclusions and recommendations

Tables

Compilation tables of analytical results for soil, sediment, groundwater and surface water should clearly indicate the exceedances in relation to the applicable criteria, guidelines and standards (for results of this field campaign and previous campaigns):

Figures

The report must include a general location map and a site plan, piezometric maps for each hydrogeological unit, and plans or figures showing the locations of soil borings and monitoring wells. The analysis results should be shown schematically (in relation to federal guideline levels and provincial criteria). Integrate data from previous studies into figures to illustrate the spread of the plume as far as can be ascertained from the information available.

The Consultant must estimate the volumes of contaminated water and soil as well as the extent of groundwater, surface water and sediment contamination in relation to the different levels of contamination (both federal and provincial), and produce a scale map showing the spatial locations of these volumes. The Consultant must also estimate the quantities of waste, both hazardous and non-hazardous, that are present at the site.

Appendices – At a minimum, submit reports of soil borings and construction of monitoring wells, a photo report, data for low-flow sampling of the wells, the completed NCS sheet and analysis and quality control certificates.



## **7.0 TIMETABLE**

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Work related to Required Services 3 and 4 (SR-3 & SR-4) must start as soon as possible after contract award as the goal is that they be completed by March 31, 2019.

If fieldwork is required (SA-1 and/or SA-2), they will need to be coordinated with PWGSC and planned to minimize delays in the preparation of plans and specifications.

PWGSC wishes to launch the tendering process for construction works (SR-5) in the spring of 2019 in order to be able to implement the remediation and/or environmental mitigation measures (whose surveillance corresponds to SR -6) at the end of summer 2019.

Any changes to the schedule must receive prior approval from PWGSC. If one or more optional activities are not carried out, the number of weeks allotted to those activities will be removed from the schedule.

## **8.0 CONFIDENTIALITY OF INFORMATION**

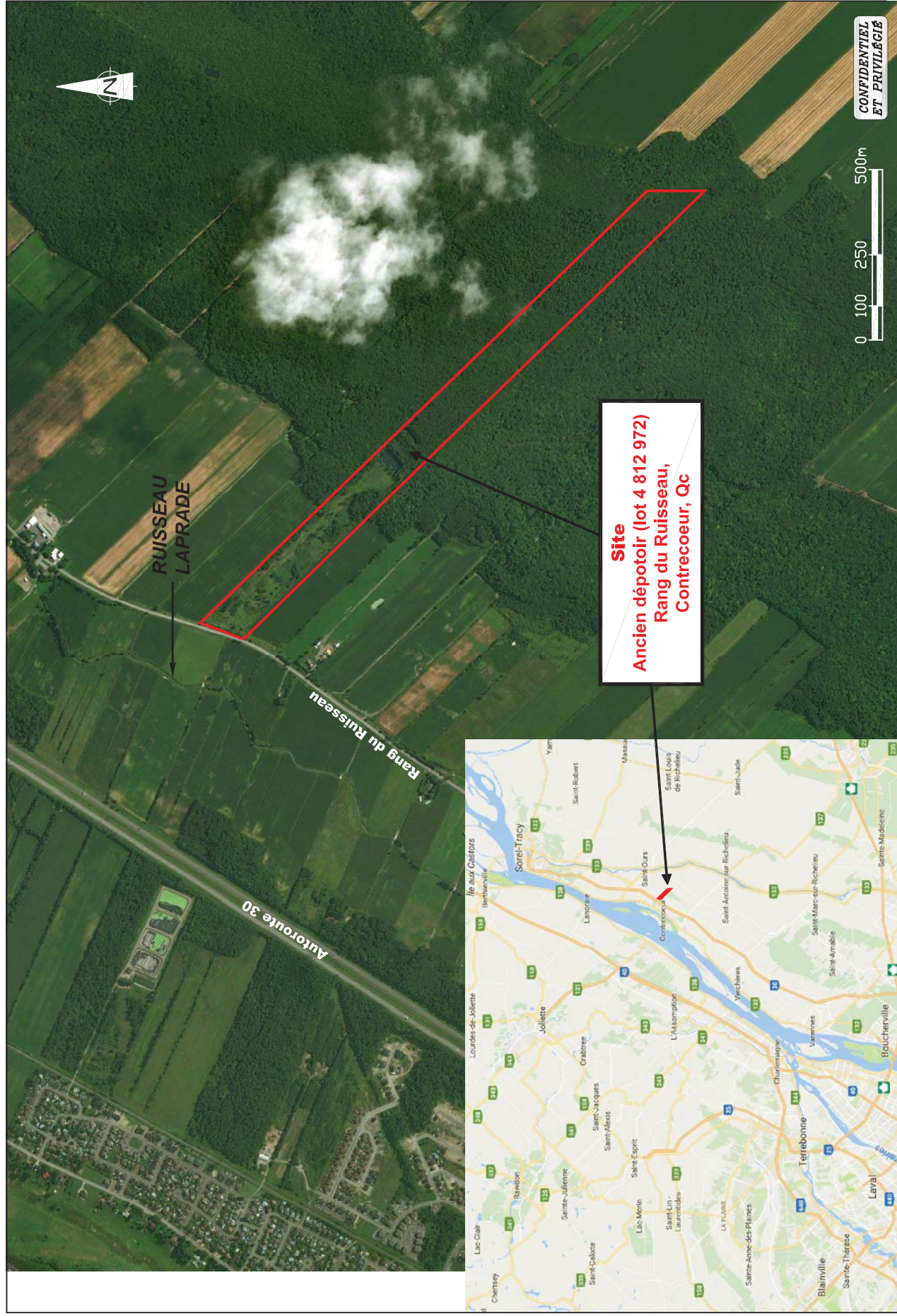
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Any information received and documents produced in connection with this mandate remain the sole property of PWGSC. The Consultant may not disclose, reproduce or make reference to any documents consulted or produced in connection with this mandate without the explicit prior written consent of PWGSC. This measure applies to all document formats, including electronic versions. PWGSC reserves the right to use the documents produced by the Consultant as it sees fit.

All materials (maps, photographs, plans, etc.) received under this mandate remain the property of PWGSC and must be submitted with the final report.

## **APPENDIX A**

### **SITE MAP**



## Localisation générale du site de l'ancien dépotoir Contrecoeur



Légende:



Limite de site à l'étude

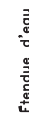


Courbe de niveau

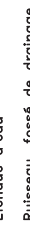
Elevation (m / niveau moyen des mers)



Zone du talus de matières résiduelles



Étendue d'eau



Ruisseau, fossé de drainage



Topographie et hydrographie du site de l'ancien dépôt Contrecoeur

## **APPENDIX B**

### **SUBMISSION FORM**

**NB:**

The following tables must be used. Any fees incurred to meet the requirements of this mandate but not specifically covered by an item in the proposal must be divided proportionally among each of the items in the proposal.

**ANNEX B1 - WORK RELATED TO REQUIRED SERVICES (RS-3 TO RS-6)**

**BID FORM**

**ARTICLE B1-1. Evaluation of hourly rates for RS-3 / RS-4 - DESIGN - FINALIZATION OF THE REMEDIATION PLAN OR MANAGEMENT PLAN & PREPARATION OF TECHNICAL PLANS AND SPECIFICATIONS:**

Item	Description	Unit	Estimated quantity (Note 1)	Firm unit prices	Total estimated cost
	<b>FEES - FIELDWORK</b>				
B1-1.1	Project Director (10 years of experience)	hour	100	\$_____	\$_____
B1-1.2	Project Manager (10 years of experience)	hour	400	\$_____	\$_____
B1-1.3	Hydrogeologist (10 years of experience)	hour	75	\$_____	\$_____
B1-1.4	Geotechnical specialist (10 years of experience)	hour	150	\$_____	\$_____
B1-1.5	Fieldwork manager (8 years of experience)	hour	50	\$_____	\$_____
B1-1.6	Fieldwork manager (8 years of experience)	hour	20	\$_____	\$_____
B1-1.7	Administrative personnel	hour	60	\$_____	\$_____
B1-1.8	Draft person	hour	80	\$_____	\$_____
	<b>TOTAL - ARTICLE B1-1</b>	Total estimated cost for Fees RS-3 / RS-4 Work (Applicable Taxes not included)			<b>\$_____</b>

Note 1 : Estimated quantity for submission. This quantity will be adjusted according to actual quantities and field observations. Quantities must first be approved by the Project Authority.

**ARTICLE B1-2. Evaluation of hourly rates for RS-5 - CALL FOR TENDERS & AWARD OF CONTRACTS:**

Item	Description	Unit	Estimated quantity (Note 1)	Firm unit prices	Total estimated cost
	<b>FEES - FIELDWORK</b>				
B1-2.1	Project Director (10 years of experience)	hour	15	\$_____	\$_____
B1-2.2	Project Manager (10 years of experience)	hour	120	\$_____	\$_____
B1-2.3	Hydrogeologist (10 years of experience)	hour	20	\$_____	\$_____
B1-2.4	Geotechnical specialist (10 years of experience)	hour	50	\$_____	\$_____
B1-2.5	Fieldwork manager (8 years of experience)	hour	0	\$_____	\$_____
B1-2.6	Fieldwork manager (8 years of experience)	hour	0	\$_____	\$_____
B1-2.7	Administrative personnel	hour	15	\$_____	\$_____
B1-2.8	Draft person	hour	25	\$_____	\$_____
	<b>TOTAL - ARTICLE B1-2</b>	Total estimated cost for Fees RS-5 Work (Applicable Taxes not included)			<b>\$_____</b>

Note 1 : Estimated quantity for submission. This quantity will be adjusted according to actual quantities and field observations. Quantities must first be approved by the Project Authority.

**ARTICLE B1-3. Evaluation of hourly rates for RS-6 - MONITORING WORK:**

Item	Description	Unit	Estimated quantity (Note 1)	Firm unit prices	Total estimated cost
	<b>FEES - FIELDWORK</b>				
B1-3.1	Project Director (10 years of experience)	hour	40	\$ _____	\$ _____
B1-3.2	Project Manager (10 years of experience)	hour	200	\$ _____	\$ _____
B1-3.3	Hydrogeologist (10 years of experience)	hour	50	\$ _____	\$ _____
B1-3.4	Geotechnical specialist (10 years of experience)	hour	150	\$ _____	\$ _____
B1-3.5	Fieldwork manager (8 years of experience)	hour	300	\$ _____	\$ _____
B1-3.6	Fieldwork manager (8 years of experience)	hour	100	\$ _____	\$ _____
B1-3.7	Administrative personnel	hour	30	\$ _____	\$ _____
B1-3.8	Draft person	hour	40	\$ _____	\$ _____
	<b>TOTAL - ARTICLE B1-3</b>	Total estimated cost for Fees RS-6 Work (Applicable Taxes not included)			\$ _____

Note 1 : Estimated quantity for submission. This quantity will be adjusted according to actual quantities and field observations. Quantities must first be approved by the Project Authority.

**ARTICLE B1-4. Travel and living expenses (actual expenses - on submission of invoices)\***

Item	Description	Unit	Estimated quantity (Note 1)	Maximal authorized amount	Total estimated cost
	<b>TRAVEL AND LIVING EXPENSES (Transportation (Note 2), meals, accomodation)</b>				
B1-4.1	Total estimated cost for RS-3 / RS-4 Services	Lump sum	1	2 000 \$	2 000 \$
B1-4.2	Total estimated cost for RS-5 Services	Lump sum	1	3 000 \$	3 000 \$
B1-4.3	Total estimated cost for RS-6 services	Lump sum	1	8 000 \$	8 000 \$
	<b>TOTAL - ARTICLE B1-4</b>	Total estimated cost for Fees RS-3 and RS-6 Work (Applicable Taxes not included)			<b>13 000 \$</b>

**Note :**

Note 1 : Estimated quantity for submission. This quantity will be adjusted according to actual quantities and field observations. Quantities must first be approved by the Project Authority.

Note 2 : Travel mileage must be calculated from the PWGSC office in Montreal (Place Bonaventure) or the Consultant's office whichever is shorter

\* : Rates shown in the receipt must be in accordance with the National Joint Council Travel Directive (NJC) Travel Allowance.

<http://www.njc-cnm.gc.ca/directive/travel-voyage/s-td-dv-a3-fra.php>

**TOTAL ESTIMATED COST - APPENDIX B1 :**

Sum of amounts from articles B1-1, B1-2, B1-3 et B1-4

\$ \_\_\_\_\_  
(To be completed by the bidder)  
(excluding GST/HST)



**ANNEX B2 - WORK RELATED TO ADDITIONAL SERVICES (AS-1 / AS-2) - OPTIONAL**

**BID FORM**

**ARTICLE B2-1. Firm price :**

Item	DESCRIPTION	Firm price (excluding applicable taxes)
<b>ENVIRONMENTAL CHARACTERIZATION WORK</b>		
B2-1.1	Firm Price for execution of work related to project management of the <u>Environmental Monitoring of Groundwater and Surface Water Quality (AS-1)</u> , including all related activities, such as a thorough data review, start-up meeting, preparation and follow-up of work, drafting of the health and safety plan, the characterization and reporting plan and all related management activities <b>This project activity is optional.</b> This firm price excludes unit costs related to field work (technician, subcontractors, equipment and materials) and chemical analysis costs detailed in sections B2-2 and B2-3, as well as related expenses. travel expenses (vehicle rental, accommodation and meals), the amount of which is shown in Article B2-4.	\$ _____ <i>(To be completed by the bidder)</i>
B2-1.2	Firm Price for execution of work related to project management of the <u>Complementary Environmental Characterization (AS-2)</u> , including all related activities, such as in-depth data review, kick-off meeting, preparation and follow-up of works , the drafting of the health and safety plan, the characterization and reporting plan and all related management activities. <b>This project activity is optional.</b> This firm price excludes unit costs related to field work (technician, subcontractors, equipment and materials) and chemical analysis costs detailed in sections B2-2 and B2-3, as well as related expenses. travel expenses (vehicle rental, accommodation and meals), the amount of which is shown in Article B2-4.	\$ _____ <i>(To be completed by the bidder)</i>
<b>TOTAL - ARTICLE B2-1</b>		\$ _____ <i>(To be completed by the bidder)</i>

**Breakdown of Firm Price Fees: The Bidder must complete the firm price breakdown table at the end of Annex B2** (Note that this section will not be included in the final version of the contract).

**ARTICLE B2-2. Firm Hourly Rates**

Item	Description	Unit	Estimated quantity (Note 1)	Firm unit prices	Total estimated cost
<b>FEES - FIELWORK</b>					
B2-2.1a	Fieldwork Manager AS-1 (Intermediate Professional or Senior Technician)	Hour	25	\$ _____	\$ _____
B2-2.1b	Support for AS-1 fieldwork (Professional or junior technician)	Hour	25	\$ _____	\$ _____
B2-2.2a	Fieldwork Manager AS-2 (Intermediate Professional or Senior Technician)	Hour	45	\$ _____	\$ _____
B2-2.2b	Support for AS-2 fieldwork (Professional or junior technician)	Hour	40	\$ _____	\$ _____
<b>TOTAL - ARTICLE B2-2</b>		Total estimated cost for for Fees Fieldwork (Applicable Taxes extra)			\$ _____

Note 1 : Estimated quantity for submission. This quantity will be adjusted according to actual quantities and field observations. Quantities must first be approved by the Project Authority.

**ARTICLE B2-3. Firm Unit Rates**

Item	Description	Unit	Estimated quantity (Note 1)	Firm unit prices	Total estimated cost
	<b>DISBURSEMENT FIELD WORK</b>				
B2-3.1	Excavation Equipment (Mobilization / Demobilization)	Lump sum	1	\$ _____	\$ _____
B2-3.2	Test pit in meters (excavation, backfilling, compaction, continuous sampling)	Meters	20	\$ _____	\$ _____
B2-3.3	Drilling Equipment (Mobilization / Demobilization)	Lump sum	1	\$ _____	\$ _____
B2-3.4	Drilling (fill / loose deposits) in meters including cleaning. Continuous sampling	Meters	20	\$ _____	\$ _____
B2-3.5	Monitoring wells equipment including installation time	Meters	20	\$ _____	\$ _____
B2-3.6	Field equipment, sampling and measurement (soil, water, flow)	Lump sum	1	\$ _____	\$ _____
B2-3.7	Management and Disposal of Solids and Surplus Liquids	Lump sum	1	\$ _____	\$ _____
B2-3.8	Surveying and leveling works	Lump sum	1	\$ _____	\$ _____
	<b>CHEMICAL ANALYSES - SOIL/SEDIMENT- REGULAR TIME FRAME</b>				
B2-3.9	Metals (Ag, As, B, Ba, Cd, Cr, Co, Cu, Sn, Mn, Mo, Ni, Pb, Se, Zn)	Unit	12	\$ _____	\$ _____
B2-3.10	Mercury (Hg)	Unit	6	\$ _____	\$ _____
B2-3.11	Petroleum hydrocarbons C10-C50	Unit	6	\$ _____	\$ _____
B2-3.12	Petroleum hydrocarbons - fraction F1-F4	Unit	6	\$ _____	\$ _____
B2-3.13	Polycyclic aromatic hydrocarbons (PAH)	Unit	6	\$ _____	\$ _____
B2-3.14	Volatile organic compound (VOC)	Unit	5	\$ _____	\$ _____
B2-3.15	Monocyclic aromatic hydrocarbons (MAH)	Unit	3	\$ _____	\$ _____
B2-3.16	BTEX	Unit	1	\$ _____	\$ _____
B2-3.17	Polychlorinated Biphenyls (PCBs - Congeners)	Unit	3	\$ _____	\$ _____
B2-3.18	Dioxins et furans (DF)	Unit	3	\$ _____	\$ _____
	<b>ANALYSES CHIMIQUES - EAUX - DÉLAI RÉGULIER</b>				
B2-3.19	Metals (Ag, Al, As, B, Ba, Cd, Cr, Co, Cu, Fe, Mn, Mo, Ni, Pb, Se, Sn, U, Zn)	Unit	10	\$ _____	\$ _____
B2-3.20	Mercury (Hg)	Unit	5	\$ _____	\$ _____
B2-3.21	Inorganic parameters (chlorides, fluorides, sulphides, ammoniacal nitrogen, cyanides)	Unit	5	\$ _____	\$ _____
B2-3.22	Petroleum hydrocarbons C10-C50	Unit	5	\$ _____	\$ _____
B2-3.23	Petroleum hydrocarbons - fraction F1-F4	Unit	3	\$ _____	\$ _____
B2-3.24	Polycyclic aromatic hydrocarbons (PAH)	Unit	2	\$ _____	\$ _____

B2-3.25	Volatile organic compound (VOC)	Unit	2	\$ _____	\$ _____
B2-3.26	Monocyclic aromatic hydrocarbons (MAH)	Unit	1	\$ _____	\$ _____
B2-3.27	BTEX	Unit	3	\$ _____	\$ _____
B2-3.28	Polychlorinated Biphenyls (PCBs - Congeners)	Unit	3	\$ _____	\$ _____
B2-3.29	Dioxins et furans (DF)	Unit	3	\$ _____	\$ _____
B2-3.30	Biochemical oxygen demand (BOD <sub>5</sub> )	Unit	1	\$ _____	\$ _____
B2-3.31	Hardness	Unit	1	\$ _____	\$ _____
B2-3.32	Suspended solids	Unit	2	\$ _____	\$ _____
B2-3.33	Ethylene glycol	Unit	2	\$ _____	\$ _____
B2-3.34	Methyl alcohol	Unit	2	\$ _____	\$ _____
B2-3.35	Isopropyl alcohol	Unit	2	\$ _____	\$ _____
<b>TOTAL - ARTICLE B2-3</b>		Total estimated cost for Work Subject to Firm Unit Prices (Applicable Taxes not included)			\$ _____

Note 1 : Estimated quantity for submission. This quantity will be adjusted according to actual quantities and field observations. Quantities must first be approved by the Project Authority.

**ARTICLE B2-4. Travel and living expenses (actual expenses - on submission of invoices)\***

Item	Description	Unit	Estimated quantity (Note 1)	Maximal authorized amount	Total estimated cost
	<b>TRAVEL AND LIVING EXPENSES (Transportation (Note 2), meals, accomodation)</b>				
B2-4.1	Total estimated cost for services AS-1	Lump sum	1	1500	1500
B2-4.2	Total estimated cost for services AS-2	Lump sum	1	2000	2000
	<b>TOTAL - ARTICLE B2-4</b>	Total estimated cost for Services AS1 and AS2 Work (Applicable Taxes not included)			<b>3500</b>

**Note :**

Note 1 : Estimated quantity for submission. This quantity will be adjusted according to actual quantities and field observations. Quantities must first be approved by the Project Authority.

Note 2 : Travel mileage must be calculated from the PWGSC office in Montreal (Place Bonaventure) or the Consultant's office whichever is shorter

\* : Rates shown in the receipt must be in accordance with the National Joint Council Travel Directive (NJC) Travel Allowance.

<http://www.njc-cnm.gc.ca/directive/travel-voyage/s-td-dv-a3-fra.php>

**TOTAL ESTIMATED COST - APPENDIX B2 :**

**Sum of amounts from articles B2-1, B2-2, B2-3 et B2-4**

\$ \_\_\_\_\_  
(To be completed by the bidder)  
\_\_\_\_\_  
(excluding GST/HST)

ANNEX B2  
BID FORM  
FIRM PRICES SPREAD SHEET

(Note that this section will not appear in the final version of the contract)

Breakdown						
The bidder should provide, for information only, a breakdown of the firm prices in its bid.						
DESCRIPTION OF ITEMS FOR BREAKDOWN		Reference	Article B2-1.1*	Article B2-1.2*	Total estimated cost per breakdown item	
The bidder should indicate the approximate number of hours and the all-inclusive firm hourly rates for each category of labour employed in the tasks described in articles B2-1.1 and B2-1.2 of Annex B2		Description	Environmental Monitoring of Groundwater and Surface Water Quality (AS-1)	Complementary Environmental characterization (AS-2)	(To be completed by the bidder)	
		All-inclusive firm hourly rates (To be completed by the bidder)	Approximate number of hours 1 (To be completed by the bidder)			
Fee 1	Project manager	\$/hrs	hrs	hrs	\$	
Fee 2	Senior project leader	\$/hrs	hrs	hrs	\$	
Fee 3	Junior professional	\$/hrs	hrs	hrs	\$	
Fee 4	Draftsperson	\$/hrs	hrs	hrs	\$	
Fee 5	Administrative staff	\$/hrs	hrs	hrs	\$	
Disb. .1	Inclusive disbursement (communication, reporting, associated expenses)	Aggregate amount	\$	\$	\$	
SUBTOTAL PER ACTIVITY (bring forward to article B2-1)			\$	\$	\$ -	
TOTAL - Breakdown of article B2-1 items			\$ (To be completed by the bidder)			

Note :

\* : Optional Activity (Additional Services)

1 : Depending on the activities involved, certain professionals could be assigned a nil number of hours.

ANNEX B

BID FORM - COST REVIEW

Item	Description	ANNEX B1 - REQUIRED SERVICES (RS)	ANNEX B2 - ADDITIONAL SERVICES (AS)
Art. B1-1 à B1-3 et B2-2	Firm hourly rates (Fieldwork staff)	\$ _____	\$ _____
Art. B2-1	Firm price (Project management)	N/A	\$ _____
Art. B2-3	Firm unit price for fieldwork and other work	N/A	\$ _____
Art. B1-4 et B2-4	Travel and living expenses	13 000 \$	3 500 \$
TOTAL BY ANNEX (excluding tax)		\$ _____	\$ _____
TOTAL GLOBAL (excluding tax))		\$ _____	

## ANNEX C

### KEY RESSOURCES IDENTIFICATION FORM

Offeror must identify different (ideally) key people from the Team assigned to project execution

	1 <sup>(1)</sup>	2 <sup>(1)</sup>	3 <sup>(1)</sup>	4	5
Title of the Position	Project Director	Principal Project Manager	Subsidiary Project Manager	Hydrogeologist	Geotechnical specialist
	<i>(to be completed by the offeror)</i>				
Name, Firstname	..... .....	..... .....	..... .....	..... .....	..... .....
Professional accreditation (name of the Ordre)	.....	.....	.....	.....	.....
Membership Number	.....	.....	.....	.....	.....
Name of the Firm	.....	.....	.....	.....	.....
Years of Experience	.....	.....	.....	.....	.....

	6	7	8	9	10 <sup>(2)</sup>
Title of the Position	Principal Worksite supervisor	Subsidiary Worksite supervisor	Junior Professional 1	Junior Professional 2	Expert of CEAEQ
	<i>(to be completed by the offeror)</i>				
Name, Firstname	..... .....	..... .....	..... .....	..... .....	..... .....
Professional accreditation (name of the Ordre)	.....	.....	.....	.....	.....
Membership Number	.....	.....	.....	.....	.....
Name of the Firm	.....	.....	.....	.....	.....
Years of Experience	.....	.....	.....	.....	.....

**Note :**

<sup>1</sup> : there must be at least one person member of the Ordre des ingénieurs du Québec (OIQ) among the project director and the project managers

<sup>2</sup> : The expert with the *Centre d'expertise en analyse environnementale du Québec* (CEAEQ) can be one of the nine (9) person listed above or be a distinct one.

## ANNEX E

### TYPE FORM FOR PRESENTATION OF PRIOR PROJECTS

<b>Previous project number :</b>					
<b>Type of project :</b>	<input type="radio"/> Evaluation for the rehabilitation or environmental management options of contaminated sites	<input type="radio"/> Preparation of plans and specifications for environmental remediation of contaminated sites	<input type="radio"/> Environmental remediation work surveillance on contaminated sites	<input type="radio"/> Environmental characterization project for contaminated sites	<input type="radio"/> Other : _____
<b>Name of project :</b>					
<b>Location of project :</b>					
<b>Name of firm :</b>					
<b>The firm was :</b>		<input type="radio"/> Main Firm		<input type="radio"/> Part of a Joint-Venture	
<b>If part of a Joint-Venture :</b>	<b>Name of partner(s) :</b>				
<b>Responsibilities of firm (must be sufficiently detailed to provide understanding of the relationship between the description of the previous project and the extent of the firm's involvement, as well as the relationship to this project)</b>					
<b>Description of project (must be sufficiently detailed to provide an understanding of the exact nature of the project and the services to be performed) :</b>					
<b>Service performance: the Proponent must specify whether the services for which it is or was responsible were performed or whether they have not yet been performed, and why :</b>					
<b>Initial budget :</b>		<b>Final Budget :</b>			
Reason for difference in final budget :					
<b>Project start date (month/year) :</b>		<b>Project end date (month/year) :</b>	If an incomplete multi-year project, date of first year completed (month/year) :		
Reason for not meeting deadline :					
<b>Relevance of project to this project (must be sufficiently detailed to provide an understanding of the relationship to the services required in this project) :</b>					
<b>Name(s) of mandatory key personnel proposed for this project who were also part of the team assigned to the previous project, including their duties and responsibilities (must be sufficiently detailed to provide an understanding of the relationships to the positions and responsibilities assigned to these individuals for this project) :</b>					
<b>Client name, address and daytime telephone number (updated) :</b>					

Note: PWGSC reserves the right to verify references.

**ANNEX F**  
**Evaluation process / evaluation criteria**  
**TABLE of Content**

**PART 3 – OFFER PREPARATION INSTRUCTIONS**

- 3.1 Offer Preparation Instruction
- 3.2 Quality and Clarity of the offers
- 3.3 Requirements for Offer Format
- 3.4 Specific Requirements for Offer Format

**PART 4 – PROPOSAL EVALUATION PROCEDURES AND SELECTION METHODS**

- 4.1 Evaluation Procedures
- 4.2 Technical Evaluation
  - 4.2.1 Mandatory Technical Criteria
  - 4.2.2 Point Rated Technical Criteria
  - 4.2.3 Evaluation and Rating of Technical Criteria
- 4.3 Financial Evaluation
  - 4.3.1 List of unit rates and submission form (price table)
  - 4.3.2 Rating of the Financial Offer
- 4.4 Offers Selection Method
  - 4.4.1 Calculation of the Offer's Final Score
  - 4.4.2 Offer Selection



## **PART 3 - OFFER PREPARATION INSTRUCTIONS**

### **3.1 Offer Preparation Instructions**

Canada requests that Offerors provide their offer in separately bound sections as follows:

Section I: Technical Offer (4 hard copies)

Section II: Financial Offer (2 hard copies)

#### **Section I : Technical Offer**

In their technical offer, Offerors should explain and demonstrate how they propose to meet the technical requirements of this call for offers and how they will carry out the Work as described in the Technical Specifications (Annex A). For the point rated technical criteria, they should refer to the specifications described at Part 4 - Proposal evaluation procedures and selection method.

#### **Section II : Financial Offer**

Offerors must submit their financial offer in accordance with the Basis of Payment (see Annex B). The total amount of Applicable Taxes must be shown separately, if applicable.

### **3.2 Quality and Clarity of the Offers**

The technical offer must contain all the information requested in this document without any superfluous or irrelevant material. The level of quality must be on a par with the standards customarily required for the drafting of study reports, in terms of clarity, appearance, language and document structure.

In order to help the offer's evaluation, Canada asks that proponents to respect the order of evaluation criteria (part 4 of this document), under the same sections. To avoid duplication, offerors can reference as accurately as possible (paragraph, page) to the sections of their offer for a covered subject.

### **3.3 Requirements for Offer Format**

Canada requests that offerors follow the format instructions described below in the preparation of their offer:

- Submit one (1) original and three (3) copies of the technical offer ;
- Submit one (1) original and one (1) copies of the financial offer (separate sealed envelope) ;
- Use 8.5 x 11 inch (216 mm x 279 mm) paper;
- Minimum font size: 11 point Times or equivalent ;
- Minimum margins: 25 mm right and 12 mm left, top and bottom
- Offers must be submitted double-sided
- One (1) page means one side of a sheet of paper.
- Fold-out sheets (11" x 17") for tables, organization charts, etc. will be counted as two (2) pages
- Use a numbering system that corresponds to the offer solicitation (see section 4.2.2).

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

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 according to the 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, Offerors should:

- 1) use paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

### **3.4 Specific Requirements for Offer Format**

**The maximum number of pages**, including text, tables, figures, plans, diagrams and organization charts) **to be submitted for the Rated Requirements is 11 pages**. The maximum number of pages indicated for each point rated criterion must also be respected (see section 4.2.2).

The following are not part of the page limitation mentioned above:

- Covering letter;
- Integrity Provisions – Required Documentation ;
- Front page of the RFP ;
- Front page of revision(s) to the RFP;
- Declaration/Certifications Form (Section III) ;
- Team Identification Form (Annex C) ;
- *Curriculum vitae* (CV) of Key People required at section 4.2.2.1 ;
- Financial offer including the Price Proposal Form (Section II).

Offeror must take into account and comply with all the described requirements for offer preparation.

***Consequence of non-compliance: any pages which extend beyond the above page limitation and any other attachments will be extracted from the offer and will not be forwarded to the PWGSC Evaluation Board members for evaluation.***

## PART 4 - PROPOSAL EVALUATION PROCEDURES AND SELECTION METHOD

This part describes the evaluation criteria that will be used by the PWGSC Evaluation Board members in order to evaluate the offers' compliance and quality. The evaluation procedures includes the rating of information of the offer in respect with the evaluation criteria described in the present part.

### 4.1 Evaluation procedures

The technical offer must contain all the information requested in this document without any superfluous or irrelevant material. The level of quality must be on a par with the standards customarily required for the drafting of study reports, in terms of clarity, appearance, language and document structure

The technical offer must comply with all mandatory requirements. If that is the case, the technical offer will be deemed responsive and will be evaluated on the basis of the point rated criteria. Failure to meet the mandatory requirements will render the offer non responsive and no further evaluation will be carried out.

Evaluation procedure will be done as following :

- a) Offers will be assessed in accordance with the entire requirement of the Request of proposal including the technical and financial evaluation criteria.
- b) An evaluation team composed of representatives of Canada will evaluate the offers
- c) The evaluation of rated requirements with respect to the technical offer will be carried out by an evaluation board composed of representatives of Public Works and Government Services Canada. The evaluation method for technical rated requirements is presented in section 4.2.
- d) Only the price offer of proponents whose technical offer have received a passing score will be evaluated. The evaluation method for price offer is presented in Section 4.3.

### 4.2 Technical Evaluation

In order to determine the score for the technical criteria, each offer previously meeting the mandatory technical criteria will be evaluated and awarded an overall technical mark. The overall technical mark represents **70%** of the overall evaluation score of the proposal (including financial criteria - see Section 4.4).

#### 4.2.1 Mandatory Technical Criteria

The technical proposal must mandatorily include points listed in the following sections without however being limited to them. If these mandatory technical criteria are not satisfied, the Tenderer's proposal will be judged inadmissible.

##### 4.2.1.1 Key People on the Tenderer's Team and Organization Chart

For the present Contract, the Tenderer must submit the names of nine (9) required key people from the Team assigned to project execution, and, as called for, the name of the company that hires these people if it is different from that of the Prime Consultant.

Thus, the Tender must identify one person for each of the key positions defined below:

- ✓ A project director with at least ten (10) years relevant experience<sup>1</sup> in project management for environmental rehabilitation of contaminated sites, over the past fifteen (15) years;
- ✓ Two (2) project managers (principal and subsidiary) with at least ten (10) years relevant experience including five (5) years in environmental characterization and rehabilitation of contaminated sites, over the past fifteen (15) years;
- ✓ A hydrogeologist, member of the *Ordre des ingénieurs du Québec* (OIQ) or member of the *Ordre des géologues du Québec* (OGQ), with at least ten (10) years of relevant experience in the environmental rehabilitation field, over the past fifteen (15) years;
- ✓ A geotechnical specialist, member of the OIQ, with at least ten (10) years of experience relevant to

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<sup>1</sup> "Relevant experience" is understood as being in the services and additional services listed in Annex A.

- the project, over the past fifteen (15) years;
- ✓ Two (2) worksite supervisors (principal and subsidiary) with at least eight (8) years of relevant experience in the environmental field, over the past ten (10) years;
- ✓ An managing engineer responsible for System operation, member of the OIQ, with at least 10 years of relevant experience;
- ✓ Two (2) junior professionals with at least (2) years of relevant experience in the environmental field.

The Tenderer must present among his key people for the project at least:

- ✓ One (1) professional entered in the list of experts with the Centre d'expertise en analyse environnementale du Québec (CEAEQ). This person can be one of the nine (9) person listed above or be a distinct one;
- ✓ One (1) member of the Ordre des ingénieurs du Québec (OIQ) among the project director and the project managers.

An example of an acceptable (typical) form for the presentation of the information about identification of the team members is provided in Annex C. Except for the CEAEQ expert, several key positions cannot be occupied by one single person.

An organization chart must also be included (**maximum of one page**) which must indicate the name of the key resources, the name of the company for which the person works together with their functions in connection with the present contract. It will also have to present the relations that the key resources of the Team will have and also the additional staff, subcontractors and companies involved in the scope of the Project.

The specific requirements on the expectations for the subsequent evaluation of this criteria are described exhaustively in Section 4.2.2.1.

The verifications of the academic training and professional accreditation will be done using CVs which will have to be sent to the Section 4.2.2.1 - Experience and Qualification of Key Resources from the Tenderer's Team.

#### **4.2.1.4 The Firm's Execution of Comparable Projects**

For the present Contract, the Tenderer must have previously performed five (5) recent projects (i.e. undertaken during the last eight (8) years) in Canada, pertaining to environmental site assessments related to the statement of work (Annex A).

The submitted projects must include at least:

- ✓ An evaluation for the rehabilitation or environmental management options of contaminated sites;
- ✓ A preparation of plans and specifications for environmental remediation of contaminated sites;
- ✓ A project of environmental remediation work surveillance on contaminated sites, and;
- ✓ An environmental characterization project for contaminated sites.

The requirements as to the expectations for the subsequent evaluation of this criteria are described exhaustively in Section 4.2.2.2.

### **4.2.2 Point Rated Technical Criteria**

The compliant proposals (meaning those which satisfy all the mandatory criteria) will be examined, evaluated and scored by a PWGSC evaluation committee.

At this stage, the financial proposals will not have been opened and only the technical components of the proposal will be evaluated based on the criteria listed in the following sections.

#### **4.2.2.1 Point Rated Criterion 1: Experience and qualifications of the key resources on the Tenderer's Team (maximum two page; 23 points)**

For this point rated criterion, the Consultant must demonstrate that it possesses resources with the necessary academic training, work experience and skills, aptitudes and expertise for all of the services required to deliver the types of projects described in the statement of work (Annex A).

The Tenderer must next describe the experience and skill of the mandatory key people proposed for the execution of the Contract Work (identified in Section 4.2.1.1). It must bring out the strong points of the team's resources and underline their responsibilities, commitments and prior executions.

In the description of the Offeror's team, the participation of the key personnel proposed for the submitted projects (section 4.2.1.2) and the teams of specialists who have shown to have previously worked together will be considered during the evaluation.

For this purpose, the proposer must provide a curriculum vitae a (CV) for each member of the mandatory key people (**maximum of two pages per person – not included in the maximum number of pages**) identified in Section 4.2.1.1 - *Key People on the Tenderer's Team*. The CV must include, without being limited to it:

- The person's name;
- The name of their current employer;
- The number of years working for their current employer;
- The title of the position and the responsibilities of the person for their current employer;
- The number of years of experience at this position for their current employer;
- The title of the position proposed for the present project;
- The academic training including:
  - ✓ The diploma, the year it was obtained and the name of the degree granting institution;
  - ✓ Other relevant training, including the year and the name of the institution;
- Professional accreditations, including the accreditation number;
- Experience working with federal requirements (including the number of projects done)
- Professional experience relevant to the present Project (ideally at least five relevant projects) including the start date, end date, employer's name, main responsibilities and achievements related to:
  - ✓ The position proposed for this person on the present Project;
  - ✓ Other relevant experience not related to the position proposed for the present Project.

#### **4.2.2.2 Point Rated Criterion 2: Experience and performance of the Tenderer's Team in connection with prior projects (five pages; 23 points)**

For this point rated criterion, the Consultant must show that, over the course of the last eight (8) years, the Consultant or its key personnel has successfully fulfilled and completed at least five (5) environmental site assessment projects in Canada in relation to the services described in the statement of work (Annex A). The Consultant must demonstrate that it has carried out projects of a diverse nature that are comparable and relevant to the statement of work. The completeness of the requested information, as well as the relevance, scope, complexity and achievement of project objectives will be evaluated in relation to the scope of the required services (Annex A).

The evaluation of the submitted past projects will consider the following points, among others:

- ✓ Recent (i.e. undertaken during the last eight (8) years);
- ✓ Complexity and scale of the project;
- ✓ Project involving multiple media<sup>2</sup> and/or contaminants;
- ✓ Project concerning abandoned industrial sites;
- ✓ Project involving multiple types of required services as described in Annex A; and
- ✓ Delivery by the key personnel members of the team proposed in this bid.

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<sup>2</sup> Throughout this document, the term "media" will be defined as follows: soil, waste matter, sediment, groundwater, surface water, wastewater, immiscible-phase products (floating or dense), air, etc.

To do this, in a maximum of **one (1) page per project**, the Tenderer must present brief descriptions of five (5) projects that meet the requirements of the mandatory criterion presented in section 4.2.1.2.

Preferably, those five (5) projects should include at least two (2) projects that were carried out in Quebec and two (2) projects carried out on behalf of departments or federal agencies, or in accordance with federal requirements. The expression "carried out on behalf of departments or federal agencies" means that the bidder was awarded a contract by a department or federal agency, in which it acted as the project's primary consultant.

Information to be supplied for each project:

- ✓ Project title, client and nature (e.g. Preparation of plans and specifications);
- ✓ Concise, detailed description of the project and objectives;
- ✓ Scope of services rendered that are relevant to the statement of work, the project objectives, the constraints and the documents to be produced as part of the project;
- ✓ Specific characteristics of the project;
- ✓ Summary of the project's costs (initial budget and cost of completion of the project);
- ✓ Summary of the project timeline;
- ✓ In a situation of schedule and cost overruns, provide the justifications;
- ✓ The demonstration of the relevance of the project compared to the requirements of the present Contract;
- ✓ Client references (names, addresses and telephone numbers of clients whose names are given as references regarding the execution of work);
- ✓ Names of key Consultant personnel responsible for project delivery.

The Proponent (as defined in GI2 Article "Definitions" of R1410T General Instructions to Proponents) must have knowledge of the above projects.

An example of an acceptable form (typical) for the presentation of the information about the presentation of prior projects is provided in Annex D.

Note: PWGSC reserves the right to verify references.

#### **4.2.2.3 Point Rated Criterion 3: Understanding of the scope and overall execution of the Project (maximum one page; 9 points)**

In application of this point rated criterion, the Consultant must provide an understanding of the scope of the mandate(s) to be performed over the life of the Project. The various phases of the Project (evaluation and choice of the option of environmental rehabilitation or management, preparation of plans and specifications for the construction, carrying out of additional environmental studies, supervision of construction works) must be presented summarily as well as the personnel key provided at each step. The tenderer must demonstrate understanding of the project's goals, functional and technical requirements, constraints and aspects that will affect the finished product.

The quality of the information provided will be assessed and judged according to its clarity and brevity, as well as whether it is complete and presented in a consistent manner.

Information that should be supplied:

- ✓ functional and technical requirements
- ✓ important issues, challenges and constraints
- ✓ the preliminary schedule; review schedule and cost information and assess risk management elements that may affect the project
- ✓ general goals (federal brand, sustainable development, special features).

#### 4.2.2.4 Point Rated Criterion 4: Procedure, Methodology and Approach for Management of the Services Proposed by the Bidder (three pages; 15 points)

For this point rated criterion, the Consultant will explain how it plans to perform the services, meet the project constraints, and apply service management procedures to ensure the continuity and consistency of production control and the effectiveness of communications, as well as the team structure and management method.

The Consultant must demonstrate that it understands the scope of the requested services (Annex A) and the manner in which they are to be delivered. It must also explain how its project team will be organized with regard to the approach and methodology used for the performance of the required services. Finally, it must define the procedures that it will implement to be able to deliver the required services as per the schedule and the agreed cost, and to guarantee their quality.

##### Information that should be supplied:

- ✓ Understanding of the scope of the required services;
- ✓ Description of the Offeror's organizational structure used to deliver the required services:
  - Confirmation of the creation of a full project team, including the names of the Consultant and the subcontractors and their role on the projects ensuing from the Standing Offer for all of the required services;
  - Organization chart (**maximum one page**) with position titles and names; Composition of the team, responsibilities and reporting relationships, and identification of relevant subcontractors;
  - Description of the procedure applied by the Consultant to execute subsequent contracts and identification of relevant subcontractors;
- ✓ The methodologies and techniques used to provide the required services;
- ✓ Description of the Offeror's project management for the purpose of executing the subsequent mandate(s) for the contract:
  - Description of a service action plan describing implementation strategies for the main activities and the order in which those activities will be implemented;
  - Intended approach in responding to individual subsequent mandate(s) for the contract;
  - Project management approach to working with PWGSC (understanding of PWGSC management structure, client environment, working with the government in general);
  - Profile of key positions (responsibilities and special assignments);
  - Assignment of resources and availability of qualified back-up personnel;
  - Communication strategies;
- ✓ Response times: explanation of how requirements pertaining to response times will be met;
- ✓ Description of the means and methods selected for resolving conflicts among the various project stakeholders (interpersonal conflicts, etc.);
- ✓ Description of the means implemented to present "fair and reasonable" costs for call-ups for the Standing Offer; and
- ✓ Description of the firm's service quality assurance and control plan.

#### 4.2.3 Evaluation and Rating of Technical Criteria

##### 4.2.3.1 Generic Evaluation Table

PWGSC Evaluation Board members will evaluate the strengths and weaknesses of the offer according to the evaluation criteria and will rate each criterion with even numbers (0 to 10 points) for each point rated criterion using the generic evaluation table below:

	INADEQUATE	WEAK	ADEQUATE	FULLY SATISFACTORY	STRONG
0 point	1 or 2 points	3 or 4 points	5 or 6 points	7 or 8 points	9 or 10 points



Did not submit information which could be evaluated	Lacks complete or almost complete understanding of the requirements.	Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements.	Demonstrates a good understanding of the requirements.	Demonstrates a very good understanding of the requirements.	Demonstrates an excellent understanding of the requirements.
	Weaknesses cannot be corrected	Generally doubtful that weaknesses can be corrected	Weaknesses can be corrected	No significant weaknesses	No apparent weaknesses
	Proponent do not possess qualifications and experience	Proponent lacks qualifications and experience	Proponent has an acceptable level of qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced
	Team proposed is not likely able to meet requirements	Team does not cover all components or overall experience is weak	Team covers most components and will likely meet requirements	Team covers all components - some members have worked successfully together	Strong team - has worked successfully together on comparable projects
	Sample projects not related to this requirement	Sample projects generally not related to this requirement	Sample projects generally related to this requirement	Sample projects directly related to this requirement	Leads in sample projects directly related to this requirement
	Extremely poor, insufficient to meet performance requirements	Little capability to meet performance requirements	Acceptable capability, should ensure adequate results	Satisfactory capability, should ensure effective results	Superior capability, should ensure very effective results

#### 4.2.3.2 Rating of Point-Rated Technical Criteria

##### a) Evaluation score

The information provided by offerors is rated from 0 to 10 on each rated requirement;

##### b) Weighted score

The evaluation score will be multiplied by a weighting factor to obtain a weighted score for each rated requirement.

##### c) Final score

The final technical score is obtained by adding the weighted scored of each rated requirement.

#### 4.2.3.3 Technical Passing Score

The offeror must meet the following two requirements otherwise the offer will be considered non-responsive :

- ✓ Obtain a minimum passing score for point rated criteria n° 1.0, 2.0, 3.0 and 4.0 listed in the table 1 of section 4.4.1; which are : experience and qualifications of the key resources, experience and performance in connection with prior projects, understanding of the scope and overall execution of the Project and Procedure, Methodology and Approach for Management of the Services; and
- ✓ Obtain an overall score for the technical offer equal to or greater than **49 out of 70** (e.g. 70%) for the required points of all the point-rated criteria. A 70 points rating scale is used.

Failure to meet these two requirements will render the offer non-responsive and no further evaluation will be carried out.



### 4.3 Financial Evaluation

In order to determine the score for the financial criteria, each offer previously meeting the mandatory technical criteria will be evaluated and awarded an overall financial mark. The overall financial mark represents **30%** of the overall evaluation score of the proposal (including technical criteria - see Section 4.4).

The financial offer must mandatorily include points listed in the following sections without however being limited to them. If these mandatory financial criteria are not satisfied, the Tenderer's proposal will be judged inadmissible.

#### 4.3.1 List of unit rates and submission form (price table)

Offeror must join to his financial offer the Price Table Form (Annex B) completed and signed by an authorized person of the firm.

Only the financial offer of proponents whose technical offer have received a passing score will be evaluated.

#### 4.3.2 Rating of the Financial Offer

Only financial offers for technical responsive offers will be assessed.

An average price for all the technically responsive offers will be calculated by adding all of the total amounts together for the purpose of evaluation (Cost summarize table of Annex B on responsive proposals) and dividing that figure by the number of technically responsive offers.

To be able to calculate the average price, there must be at least three (3) technically responsive offers. If Canada only receives one or two technically responsive offers, the average price will not be taken into consideration.

Retained financial offers will be rated as following :

In order to determine the score for the financial criteria, each offer will be evaluated proportionally to the the lower price for the services submitted among all acceptable offers, and for a maximum financial score of 30 points. 4)

As an example, here is the calculation which will be done to determine the Financial score ::

	Offeror #1	Offeror #2	Offeror #3	Offeror #4
<b>Total cost of tender</b>	10K\$	13K\$	25K\$	32K\$
<b>Calculation</b>	$(10K\$ / 10K\$) \times 30$	$(10K\$ / 13K\$) \times 30$	$(10K\$ / 25K\$) \times 30$	$(10K\$ / 32K\$) \times 30$
<b>Financial offer score rounded to the first decimal</b>	30	23,1	12	9,4

### 4.4 Offers Selection Method

#### 4.4.1 Calculation of the Offer's Final Score

Calculation of the offer's final score will be made according to the following process :

1. To be acceptable, an offer must :

- a. Meet all the requirements of the call for offers; and,
  - b. Meet all the required technical criteria (Section 4.2.1); and,
  - c. Obtain a minimum passing score for point rated criteria n° 1.0, 2.0, 3.0 and 4.0 listed in the table 1 of section 4.4.1; and.
  - d. Obtain an overall score for the technical offer equal to or greater than **49 out of 70** (e.g. 70%) for the required points of all the point-rated criteria. A 70 points rating scale is used.
2. Failure to meet requirements a) or b) or c) and d) will render the offer non responsive and no further evaluation will be carried out.
  3. Score obtained for each criterion will be multiplied by his weighting factor indicated in the table 1 to obtain a weighted score.
  4. For each offer, rating for technical merit and price will be added to determine the final offer's score.

**TABLE 1 – POINT RATED CRITERIA AND SCORING OF OFFERS**

	<b>Weighting factor (A)</b>	<b>Score (B = 0 à 10)</b>	<b>Weighted score (C = A x B)</b>	<b>Passing score</b>
<b>Point Rated Technical Criteria</b>				
<i>1.0 Experience and qualifications of the key resources on the Tenderer's Team</i>	2,3	0-10	/23	<b>14/23</b>
<i>2.0 Experience and performance of the Tenderer's Team in connection with prior projects</i>	2,3	0-10	/23	<b>14/23</b>
<i>3.0 Understanding of the scope and overall execution of the Project</i>	0,9	0-10	/9	<b>6/9</b>
<i>4.0 Procedure, Methodology and Approach for Management of the Services</i>	1,5	0-10	/13	<b>9/15</b>
<b>5.0 TECHNICAL TOTAL SCORE (sum of 1.0, 2.0, 3.0 et 4.0)</b>			<b>/70</b>	<b>49/70</b>
<b>Financial criteria</b>				
<b>6.0 FINANCIAL SCORE</b>			<b>/30</b>	
<b>FINAL OFFER'S SCORE (sum of 5.0 et 6.0)</b>			<b>/100</b>	

#### **4.4.2 Offer Selection**

A proportion of **70%** will be given to the **technical merit** and a proportion of **30%** to the **price**.

The responsive Offer receiving the highest score or the one with the lowest price for the services will not necessarily be retained. The responsive Offer receiving the highest Final Offer's Score (combination of technical and financial score) is the first entity that the Evaluation Board will recommend for the Contract award. In the case of a tie for the final score, the Proponent submitting the lower price for the services will be recommended.

