



**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des  
soumissions - TPSGC**  
**11 Laurier St./ 11 rue, Laurier**  
**Place du Portage, Phase III**  
**Core 0B2 / Noyau 0B2**  
**Gatineau, Québec K1A 0S5**  
**Bid Fax: (819) 997-9776**

**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**

Scientific, Medical and Photographic Division / Division de  
l'équipement scientifique, des produits photographiques et  
pharmaceutiques  
11 Laurier St./ 11 rue, Laurier  
6B1, Place du Portage  
Gatineau, Québec K1A 0S5

<b>Title - Sujet</b> MESO-SCALE MARINE OIL EXPOSURE SIM.		
<b>Solicitation No. - N° de l'invitation</b> K4A22-170118/A	<b>Date</b> 2017-07-26	
<b>Client Reference No. - N° de référence du client</b> K4A22-170118		
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$PV-915-73172		
<b>File No. - N° de dossier</b> pv915.K4A22-170118	<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 2017-09-08</b>		<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>		
<b>Address Enquiries to: - Adresser toutes questions à:</b> MacCuaig, Shannon		<b>Buyer Id - Id de l'acheteur</b> pv915
<b>Telephone No. - N° de téléphone</b> (873) 469-3983 ( )		<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DEPARTMENT OF THE ENVIRONMENT 335 RIVER RD ATTN: BRUCE HOLLEBONE OTTAWA Ontario K1A0H3 Canada		

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b> See Herein	<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/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirements**

There is no security requirement associated with this bid solicitation.

### **1.2 Statement of Work**

The Work to be performed is detailed under Annex A.

### **1.3 Debriefings**

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

### **1.4 Trade Agreements**

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Canadian Free Trade Agreement (CFTA).

## PART 2 - BIDDER INSTRUCTIONS

### 2.1 Standard Instructions, Clauses and Conditions

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

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

The 2003 (2016-04-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days

Insert: 90 days

#### 2.1.1 SACC Manual Clauses

SACC Manual clause B1000T (2014-06-26) Condition of Material

### 2.2 Submission of Bids

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

#### **Bid Receiving - PWGSC**

Place du Portage, Phase III, Tower B  
11 Laurier Street  
Gatineau, Quebec  
For couriers: J8X 4A6  
For regular mail: K1A 0S5

Telephone: (819) 420-7201

Fax No.: (819) 997-9776

The above address is for the sole purpose of bid submission. No other communications are to be forwarded to this address.

No proposal shall be sent directly to the PWGSC Contracting Authority.

### 2.3 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required in Form 1 before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure

to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

### **Definitions**

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

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

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

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

### **2.4 Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

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

### **2.5 Applicable Laws**

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

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

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## PART 3 - BID PREPARATION INSTRUCTIONS

### 3.1 Bid Preparation Instructions

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

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

Section II: Financial Bid (1 hard copy and 1 soft copy on CD, DVD or USB)

Section III: Certifications (1 hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

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

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

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

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

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

### Specific Requirements for Proposal Format

The maximum number of pages (including text and graphics) to be submitted for the rated requirements is thirty (30) pages. The following are not part of the page limitation mentioned above:

- Covering letter
- Consultant Team Identification
- Integrity Provisions – Required Documentation
- Front page of the RFP
- Front page of revision(s) to the RFP
- Price Proposal

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

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## Section I: Technical Bid

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

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

The technical bid consists of the following:

- (a) **Supporting documentation:** Bidders must detail their past project experience to demonstrate compliancy to the requirement as described in Annex A.
- (b) **Installation Plan:** Bidders should include an installation plan (including the installation schedule), which must demonstrate that the Bidder's installation plan meets all the mandatory requirements for installation described Annex A.
- (c) **Training Plan:** Bidders should include a training plan, which must demonstrate that the Bidder's training plan meets all the mandatory requirements for training described in Annex A. The training plan must include, at a minimum, a description of the course materials that will be provided to participants; the training schedule; and the duration of the training.

## Section II: Financial Bid

- (a) **Pricing:** Bidders must submit their financial bid in accordance with the Basis of Payment including Annex B – Pricing Tables.
- (b) **All Costs to be Included:** The financial bid must include all costs for the requirement described in the bid solicitation for the entire Contract Period, including any option years. The identification of all necessary equipment, software, peripherals, cabling and components required to meet the requirements of the bid solicitation and the associated costs of these items is the sole responsibility of the Bidder.
- (c) **Blank Prices:** Bidders are requested to insert "\$0.00" for any item for which it does not intend to charge or for items that are already included in other prices set out in the tables. If the Bidder leaves any price blank, Canada will treat the price as "\$0.00" for evaluation purposes and may request that the Bidder confirm that the price is, in fact, \$0.00. No bidder will be permitted to add or change a price as part of this confirmation. Any bidder who does not confirm that the price for a blank item is \$0.00 will be declared non-responsive.

### 3.1.1 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Form 2 Electronic Payment Instruments, to identify which ones are accepted.

If Form 2 Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.



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### 3.1.2 Exchange Rate Fluctuation

SACC *Manual* clause [C3011T](#) (2013-11-06), Exchange Rate Fluctuation

#### Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

#### Section 3.2 Reference Checks - Customer Reference Contact Information

- a) Canada will be conducting customer reference checks on the top-ranked Bidder. Bidders must provide 3 client references
- b) The Bidder should complete Form 5 to provide, at bid closing, 3 customer references who must each confirm, when requested by Canada, the information described in [Requirements R1, R2 and R3](#) of Part 2.2 of Annex A.
- c) Reference checks will be conducted by email and the references may subsequently be contacted by telephone for additional feedback.
- d) For each customer reference, the Bidder must, at a minimum, provide the name and e-mail address for a contact person. Bidders are also requested to include the title of the contact person. It is the sole responsibility of the Bidder to ensure that it provides a contact who is knowledgeable about the services the Bidder has provided to its customer as described in the bid and who is willing to act as a customer reference. Crown references will be accepted.

## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

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

#### **4.1.1 Technical Evaluation**

##### **4.1.1.1 Mandatory Technical Evaluation Criteria**

The mandatory technical evaluation criteria are detailed in Annex A, Part 2.1.

##### **4.1.1.2 Point Rated Technical Evaluation Criteria**

The point rated technical evaluation criteria are detailed in Annex A, Part 2.2.

##### **4.1.1.2.1 Technical Rating**

To be considered, the proposal must achieve a minimum Technical Rating of 120 points out of the 200 points available.

#### **4.1.2 Financial Evaluation**

The financial evaluation will be conducted by calculating the Total Aggregated Bid Price in accordance with the pricing tables provided in Annex B - Pricing Tables.

##### **Evaluation of Price - Bid**

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, DDP (Ottawa, Ontario, Canada) Incoterms® 2000, Canadian customs duties and excise taxes included.

Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.

#### **4.1.3 Reference Checks**

(i) For reference checks, Canada will conduct the reference check in writing by e-mail. Canada will send all e-mail reference check requests to contacts supplied by the top-ranked Bidder within 1 working day using the e-mail address provided in the bid. Canada will not award any points unless the response is received within 5 working days of the date that Canada's e-mail was sent.

(ii) On the third working day after sending out the reference check request, if Canada has not received a response, Canada will notify the Bidder by e-mail, to allow the Bidder to contact its reference directly to ensure that it responds to Canada within 5 working days. If the individual named by a Bidder is unavailable when required during the evaluation period, the Bidder may provide the name and e-mail address of an alternate contact person from the same customer. Bidders will only be provided with this opportunity once for each customer, and only if the originally named individual is unavailable to respond (i.e., the Bidder will not be provided with an opportunity to submit the name of an alternate contact person if the original contact person indicates that he or she is unwilling or unable to respond). The Bidder will have 1 working day to submit the name of a new contact. That contact will again be given 5 working days

to respond once Canada sends its reference check request. Canada will not deem the reference check as passed unless the response is received from this alternate contact within 5 working days.

(iii) Wherever information provided by a reference differs from the information supplied by the Bidder, the information supplied by the reference will be the information evaluated.

(iv) The bidder will not be declared responsive if (1) the reference customer states he or she is unable or unwilling to provide the information requested, or (2) the customer reference is not a customer of the Bidder itself (for example, the customer cannot be the customer of an affiliate of the Bidder instead of being a customer of the Bidder itself). Nor will a bid be declared responsive if the customer is itself an affiliate or other entity that does not deal at arm's length with the Bidder.

#### 4.2 Basis of Selection

- a) To be declared responsive, a bid must:
  - i. comply with all the requirements of the bid solicitation; and
  - ii. meet all mandatory criteria; and
  - iii. pass the reference check; and
  - iv. obtain the required minimum of 60 % of the points for each selected rated criteria, and an overall passing mark of 120 points (60%) for the rated technical evaluation criteria which are subject to point rating. The rating is performed on a scale of **200** points.
- b) Bids not meeting i. through iv. will be declared non-responsive. Price is given a rated value which is included in the total calculation of the bid. 60% of the points will be awarded to the rated technical requirements and 40% of the points will be awarded to the financial bid.

To complete this calculation the following formula is used:

$$\frac{\text{Score of the Technical Score of the bid} \times 60}{\text{Maximum score possible}} = \text{Total 1}$$

$$\frac{\text{Lowest Total Aggregated Price of all Responsive Bidders} \times 40}{\text{Total Aggregated Price of the Bidder's bid}} = \text{Total 2}$$

$$(\text{Total 1}) + (\text{Total 2}) = \text{Highest Combined Rating of Technical Score and Price}$$

- c) The top-ranked responsive bid will be determined based on the proposal which has met all mandatory criteria, has met or exceeded the required Technical Score and offers the Highest Responsive Combined Rating of Technical Score and Price as calculated above.

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## PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

### 5.1 Certifications Required with the Bid

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

#### 5.1.1 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) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

### 5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

#### 5.2.1 Integrity Provisions – Required Documentation

In accordance with the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

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

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969) website ([http://www.esdc.gc.ca/en/jobs/workplace/human\\_rights/employment\\_equity/federal\\_contractor\\_program.page?&\\_ga=1.229006812.1158694905.1413548969](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969)).

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

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list during the period of the Contract.

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The Bidder must provide the Contracting Authority with a completed Form 4 [Federal Contractors Program for Employment Equity - Certification](#), before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed Form 4 Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

### **5.2.3 Additional Certifications Precedent to Contract Award**

#### **5.2.3.1 Education and Experience**

SACC Manual clause [A3010T](#) (2014-06-26) Education and Experience

## PART 6 - RESULTING CONTRACT CLAUSES

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

### 6.1 Security Requirements

There is no security requirement applicable to the Contract.

### 6.2 Statement of Work

#### 6.2.1 Statement of Work

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

#### 6.2.2 Optional Requirement

- a) The Contractor grants to Canada the irrevocable option to acquire the goods, services or both as further described in Annex A under the same terms and conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.
- b) The Contracting Authority may exercise the option at any time before the expiry of the Contract by sending a written notice to the Contractor.
- c) **Option to Purchase Extended Warranty:** The Contractor grants to Canada 3 additional one-year periods, exercisable at any time during the Contract Period, under the same terms and conditions and at the prices and/or rates stated in the Contract.

### 6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/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.

#### 6.3.1 General Conditions

2035 (2016-04-04), General Conditions – Higher Complexity - Services, applies to and forms part of the Contract.

##### 6.3.1.1 The following General Conditions apply to and form part of the Contract:

#### 2010A 09 (2014-09-25) Warranty

1. Despite inspection and acceptance of the Work by or on behalf of Canada and without restricting any provisions of the Contract or any condition, warranty or provision imposed by law, the Contractor, if requested by Canada to do so, must replace, repair or correct, at its own option and expense any work that becomes defective or fails to conform to the requirements of the Contract, where applicable. The warranty period will be 24 months after delivery and acceptance of the Work or the length of the Contractor's or manufacturer's standard warranty period, whichever is longer.

2. Canada must pay the transportation cost associated with returning the Work or any part of the Work to the Contractor's plant for replacement, repair or making good, and the Contractor must pay the transportation cost associated with forwarding the replacement or returning the Work or part of the Work when rectified to the delivery point specified in the Contract or to another location as directed by Canada. If, in the opinion of Canada, it is not expedient to remove the Work from its location, the Contractor must carry out any necessary repair or making good of the Work at that location and will be reimbursed its reasonable travel and living expenses.
3. The warranty period is automatically extended by the duration of any period or periods where the Work is unavailable for use or cannot be used because of a defect or non-conformance during the original warranty period. The warranty applies to any part of the Work replaced, repaired or corrected pursuant to subsection 1, for the greater of:
  - a. the warranty period remaining, including the extension, or
  - b. 90 days or such other period as may be specified for that purpose by agreement between the Parties.

## **6.4 Term of Contract**

### **6.4.1 Period of the Contract**

- (a) The period of the Contract is from contract award date up to 2 years after all the deliverables have been delivered and accepted; and
- (b) The period during which the Contract is extended, if Canada chooses to exercise any options set out in the Contract.

### **6.4.2 Delivery Date**

All the deliverables must be received within 1 year after Contract Award Date.

### **6.4.3 Delivery Points**

Delivery of the requirement will be made to delivery point(s) specified at Annex A of the Contract.

## **6.5 Authorities**

### **6.5.1 Contracting Authority**

The Contracting Authority for the Contract is:

Name: Shannon MacCuaig  
Title: Supply Specialist  
Public Works and Government Services Canada  
Commercial Consumer Products Directorate  
11 Laurier Street, 6A2, Phase III  
Place du Portage, Gatineau, Quebec, K1A 0S5

Telephone: 873-469-3983  
E-mail address: shannon.maccuaig@pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform

Solicitation No. - N° de l'invitation  
K4A22-170118/A  
Client Ref. No. - N° de réf. du client  
K4A22-170118

Amd. No. - N° de la modif.  
File No. - N° du dossier  
pv915, K4A22-170118

Buyer ID - Id de l'acheteur  
pv915  
CCC No./N° CCC - FMS No./N° VME

work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

### 6.5.2 Technical Authority

The Technical Authority for the Contract is: *(to be filled in only at contract award)*

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
  
Telephone: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

### 6.5.3 Accounts Payable Contact *(to be filled in only at contract award)*

Name: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

### 6.5.4 Contractor's Representative *(to be completed by the bidder)*

The telephone number (with extension if applicable) of the person responsible for:

#### General enquiries

Name: \_\_\_\_\_  
Tel. No. \_\_\_\_\_ ext: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

#### Delivery Follow-up

Name: \_\_\_\_\_  
Tel. No. \_\_\_\_\_ ext: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

### 6.6 Proactive Disclosure of Contracts with Former Public Servants

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

### 6.7 Payment

#### 6.7.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price, as specified in Annex B – Pricing Tables for a cost of \$\_\_\_\_\_ *(to be filled in only at contract award)*. Customs duties are included and Applicable Taxes are extra.



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

#### **6.7.2 Single Payment**

SACC Manual clause [H1000C](#) (2008-05-12) Single Payment

#### **6.7.3 Electronic Payment of Invoices – Contract**

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);

#### **6.8 Invoicing Instructions**

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
  - (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
  - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
  - (c) To facilitate the payment process, it is important that the Contractor quote the contract number on all the invoices, shipping bills and packing slips. Failure to do so will delay payment and the date used for calculating interest on overdue accounts.

#### **6.9 Certifications and Additional Information**

##### **6.9.1 Compliance**

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

##### **6.9.2 Federal Contractors Program for Employment Equity - Default by the Contractor**

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

## 6.10 Applicable Laws

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

## 6.11 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the supplemental general conditions 4009 (2013-06-27) Professional Services - Medium Complexity;
- (c) the general conditions 2010A (2016-04-04) General Conditions - Goods (Medium Complexity);
- (d) Annex A, Statement of Work;
- (e) Annex B, Pricing Tables;
- (f) the Contractor's bid dated \_\_\_\_\_ (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award: “, as clarified on \_\_\_\_\_” or “, as amended on \_\_\_\_\_” and insert date(s) of clarification(s) or amendment(s).*)

## 6.12 SACC Manual Clauses

SACC Manual clause [B1501C](#) (2006-01-28) Electrical Equipment  
SACC Manual clause [A9068C](#) (2010-01-11) Government Site Regulations  
SACC Manual clause [A2000C](#) (2006-06-16) Foreign Nationals (Canadian Contractor)  
SACC Manual clause [A2001C](#) (2006-06-16) Foreign Nationals (Foreign Contractor)  
SACC Manual clause [G1005C](#) (2016-01-28) Insurance  
SACC Manual clause [D2000C](#) (2007-11-30) Marking  
SACC Manual clause [D2001C](#) (2007-11-30) Labeling  
SACC Manual clause [D2025C](#) (2013-11-06) Wood Packaging Materials  
SACC Manual clause [D5545C](#) (2010-08-16) ISO 9001:2008 - Quality Management Systems - Requirements (QAC C)  
SACC Manual clause [D6010C](#) (2007-11-30) Palletization  
SACC Manual clause [D9002C](#) (2007-11-30) Incomplete Assemblies

## 6.13 Shipping Instructions

### 6.13.1 Shipping Instructions - Delivery at Destination

1. Goods must be consigned to the destination specified in the Contract and delivered:  
  
Delivered Duty Paid (DDP) (Ottawa, Ontario, Canada) Incoterms 2000 for shipments from a commercial contractor.
2. The Contractor will be responsible for all delivery charges, administration, costs and risk of transport and customs clearance, including the payment of customs duties and taxes.

## **ANNEX A**

### **Part 1 - STATEMENT OF WORK**

#### **1. Title: Next Generation Environmental Simulator and Ancillary Equipment**

#### **2. Background Information**

The Emergencies Science and Technology Section (ESTS) of Environment and Climate Change Canada (ECCC) has a requirement for the supply, delivery, installation, commissioning, and training of operators for one Next Generation Environmental Simulator (NGES). This requirement also includes ancillary equipment to support the NGES. The NGES will be used to simulate and examine oil behavior and fate over periods of weeks to months in fresh-water and marine environments at various temperatures, including below-freezing conditions. The equipment will be housed in a purpose-built climate-controlled chamber at ECCC's laboratory facilities at 335 River Road, Ottawa, Ontario, K1A 0H3 (termed ECCC's laboratories).

#### **3. Required Tasks**

##### **3.1 General**

A design/build type of contract will be established in which the Contractor must:

- (a) provide a detailed design for the tank; and
- (b) following design acceptance by the ECCC, the contractor must manufacture, supply, deliver and commission the tank at ECCC's laboratories. The Contractor must provide:
  - (i) training for the equipment operators;
  - (ii) spares, as specified herein; and
  - (iii) documentation in the form of drawings and manuals.

The Contractor must perform the following tasks. Detailed descriptions of the tasks follow this summary list:

Task 1: Prepare a design that meets the requirements of the technical authority for ECCC as defined in the section 4 following.

Task 2: Construct one simulator tank that shall be constructed, installed and commissioned at ECCC's laboratories at 335 River Road, Ottawa, Ontario. The simulator tank must be comprised of:

- (i) a simulator tank; and
- (ii) ancillary equipment for the simulator tank (as described in Section 4). The simulator tank will be placed in a refrigerated cold room at the ECCC's laboratories, to be built as part of a parallel construction procurement by ECCC.

Task 3: Install and commission the NGES in ECCC's laboratories

Task 4: Provide training for the ECCC staff that will operate the NGES and the ancillary equipment.

Task 5: Provide as-built drawings and training manuals for the tank and all ancillary equipment included in this procurement.

Task 6: Provide critical spares for key components as defined herein.

### **3.2 Management and Coordination with ECCC:**

The Contractor must coordinate activities with the ECCC throughout. This includes attendance at all project meetings at the ECCC's offices in Ottawa, Ontario, throughout the project. As well, it includes coordination with the ECCC's overall schedule for the design and construction phases of the facility and the building infra-structure to support it.

#### **4. Task 1: Design Criteria**

The design task must include consultation with the ECCC technical authority. The following must be included:

- (a) A project review to be conducted by the ECCC when the design is 50% complete;
- (b) Submission of the design at 99% completion to ECCC for review - the design report must document the design, with justification and support as required;
- (c) A presentation of the design to be made to ECCC at its laboratories; and
- (d) ECCC are to be allowed 10 working days to review the design and submissions for any potential revisions.

Note: The design task will be considered to be complete upon approval by the technical authority for ECCC. No work will be authorized to proceed on any subsequent parts of this procurement until the technical authority of ECCC has formally accepted the Contractor's design.

#### **4.1 Operating conditions**

The NGES will be in a cold room at -20°C to +30°C in a saline environment the tank itself is not in a saline environment but will hold a saline test solution with varying humidity levels ranging from wet to dry. The tank and all its components must operate successfully in these conditions.

The NGES must operate within the cold room, and be able to be manually transported in and out of the cold room. The tank must be able to be moved manually by no more than four people on a typical garage floor or an exterior asphalt surface.

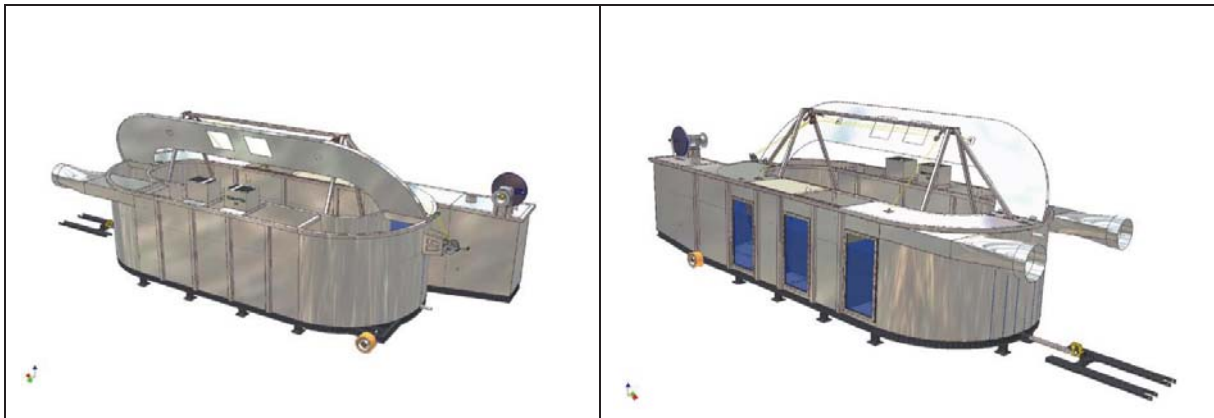
The tank must operate without structural failure or leakage. The loads applied to the tank will include those in Table 1.

**Table 1: Loadings on the Flume Tank**

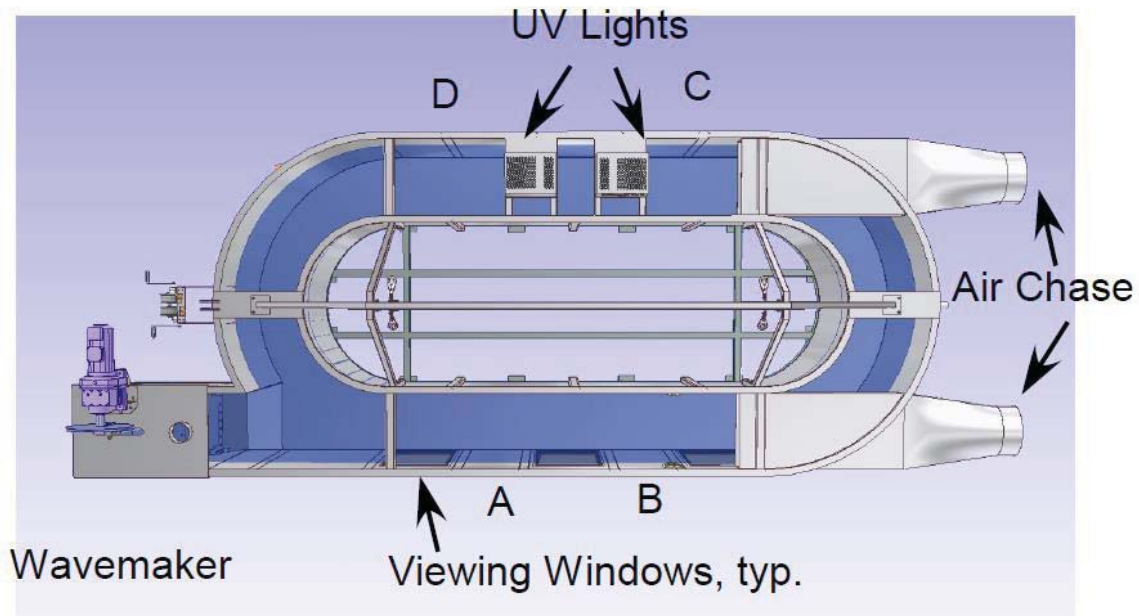
General Loading	General Description
Thermal Loads	The tank will be required to operate at air temperatures ranging from -20°C to +30°C.
Hydrostatic Loads	Loads will be produced by the fluid contained within the tank. The tank may contain either fresh water or sea water with a salinity of up to about 32 ppt.
Wave loads	Waves will be produced in the tank, as defined herein.
Wind loads	Winds will be produced in the tank, as defined herein.
Current loads	Currents will be produced in the tank, as defined herein.
Tank moved in and out of the cold room	The tank will be moved in and out of the cold room at various times. The tank will not contain fluid when it is moved. Ancillary equipment (wave-maker, current-maker, ultraviolet (UV) lights, etc.) may or may not remain attached to the tank when it is moved. The tank will be mounted on a chassis for moving it in and out of the cold room. The tank will be moved over surfaces typical of a smooth garage floor or an exterior asphalt surface.
Ice	Ice will be within the tank at times. The ice conditions in the tank will include: (a) A non-continuous ice cover of ice blocks up to about 15 cm (6 in.) thick. (b) A solid ice cover up to about 5 cm (2 in.) thick. The Contractor should note that this ice cover would be grown in-situ in the tank, which will produce expansionary stresses on the tank. The Contractor must design the tank with a system to relieve these expansionary stresses.

#### 4.2 Overview and Basic Requirements

The simulator's flume tank must have the shape and configuration shown in Figures 1 and 2.



**Figure 1: General Configuration of Next Generation Simulator**  
(Source: <http://wwwz.cedre.fr/Nos-prestations/Nos-moyens/Polludrome>)



**Figure 2: Possible Configuration of Next Generation Environmental Simulator**  
(Source for base figure: <http://www.cedre.fr/Nos-prestations/Nos-moyens/Polludrome>)

Dimensional requirements for the flume tank are listed in Table 2. Slight modifications (+/- 10%) to these dimensions may be considered by the ECCC technical authority if there are valid reasons for them. Basic requirements for the tank are summarized in Table 3, and in the text that follows.

**Table 2: Target Dimensional Requirements for the Flume Tank**

Item	Specification
Flume circulation length along inner wall	16.4 m
Flume circulation length along outer wall	20.2 m
Flume height	1.4 m
Flume width	0.6 m
Overall flume length	6.7 m
Overall flume width	2.7 m
Seawater depth <sup>7</sup>	0.9 m
Seawater volume	7.2 m <sup>3</sup>

Basic requirements for the flume tank are summarized in Table 3, and in the text that follows.

**Table 3: Other Basic Requirements for the Flume Tank**

Item	Specification
General operating environment	The tank will be in a cold room at temperatures of -20°C to + 30°C in a damp-to-wet, oily, saline environment. The tank must operate successfully in these conditions.
Fluid in tank	Crude oil, saline water or fresh water will be contained in the tank. All materials and components used for tank construction must not corrode, break-down or otherwise degrade in when any of these fluids are used in the tank.
Material for the test tank	The tank must be stainless steel, suitable for continuous immersion in salt water. In the future, the ECCC may wish to apply an oleo-phobic coating to the interior tank walls. The tank design must accommodate this potential requirement.
Air temperature	The flume tank and all of its components must operate over an air temperature range from -20°C to +30°C.
Insulation for tank walls	The tank must have insulation with a total R-Value of 3.5 m <sup>2</sup> *°C/Watt on all outer wall surfaces, including the viewing windows. The insulation panels on tank walls must be detachable. The panels must also be suitable for a wet, oily, saline environment.
Portability and chassis under tank	The tank must include a chassis that allows it to be moved in and out of the cold room manually by no more than four operators. See the text below for further specifications.
Viewing windows	The tank must have three (3) viewing windows along the long side of the tank as shown in Figures 1 and 2. Each viewing window should be approximately 1.0 m by 1.0 m (+/- 0.4m) in size. The final dimensions of the window are to be verified by ECCC before final design. The tank design must allow viewing windows to be replaced. The viewing windows must not leak and must remain leak-proof after normal operations, including moving the tank in and out of the cold room.
Wall penetrations for sampling access	The flume must have up to 16 wall ports to allow access for sampling. The sampling ports must not leak. The tank design must allow sampling ports or glands to be replaced. See section 4.3.2 for further specifications.
Lid for the tank	The tank must have a stainless steel lid that can be sealed against the main body of the tank to ensure that vapours are prevented from escaping. The lid must include a lifting mechanism, including a central frame, like that shown in Figure 1 to allow it to be lifted up for access to the tank. See section 4.3.1 for further specifications.
Air chase	The flume must include an air chase as shown schematically in Figures 1 and 2. One of its ports must provide air input to the air chase while the other must provide air egress. The inlet and outlet ports must both be able to be connected to a fan plenum outside the cold room that will be built as part of a separate procurement. Construction drawings for the cold chamber will be provided to the contractor for coordination purposes.
Heating/cooling panels inside the tank	The tank must have panels for independently heating and cooling the water in the tank. The panels must be connected to the refrigeration plant for the cold room; and they must be easily removable from the tank. Construction drawings for the cold chamber will be provided to the contractor for coordination purposes.

#### 4.3 Operational Requirements

The Operational requirements for the flume tank are summarized in Table 4.



**Table 4: Operational Requirements for the Flume Tank**

Item	Specification
Waves	<ul style="list-style-type: none"> <li>The tank must have a wave-maker as shown in Figure 2.</li> <li>Regular waves must be produced; irregular waves are not required</li> <li>The maximum wave height must be 30 cm</li> <li>Wavelength and wave type: The wave-maker must produce waves with a wave height of up to 30 cm for swells, non-breaking and breaking waves.</li> <li>The wave-maker must provide independent control in multiple increments for both the wave period and the wave height.</li> </ul>
Winds	<ul style="list-style-type: none"> <li>The tank must connect to a supplied wind source through Air Chase ports as noted on Figure 2.</li> <li>Winds with a maximum steady wind speed of 5 m/s, averaged over the cross-sectional area of the air chase, will be produced by the ECCC-supplied plenum fan</li> </ul>
Currents	<ul style="list-style-type: none"> <li>The tank must be capable of generating water currents around the tank circuit with the wave-maker and a current generator.</li> <li>The apparatus must be capable of creating currents independently from the wind regime above the water surface, or the wave field.</li> <li>The current generation system must create a current profile that varies with depth, from nil at the flume bottom to a maximum at the water surface.</li> <li>The system must produce currents that travel either clockwise or counterclockwise around the flume; the currents must be controllable in either direction and must produce both counter and counter-clockwise currents as prescribed by the user.</li> <li>The maximum current speed in either direction must be 0.2 m/s at the water surface</li> <li>The currents must be controllable in either direction in multiple increments from 0 to 0.2 m/s for the surface current at the water surface.</li> </ul>
Ultra-violet radiation	<ul style="list-style-type: none"> <li>The tank must have mounting points as required for trials of multiple ultraviolet (UV) light sources, at the general locations shown in Figure 2. The lighting system must include at least 2 UV lights, each with 4 kW power.</li> </ul>
Heating & Cooling for Water in Tank	<ul style="list-style-type: none"> <li>The tank must have heating and cooling coils that are mounted in the flume.</li> <li>Specifications for the coils are provided subsequently in Section 7.</li> </ul>

#### 4.3.1 Lid for the Tank and Supports for Instruments to be Hung Through the Tank:

The tank lid must not be insulated.

In addition to the specifications in Table 3, the tank lid must have two transparent sections with each one being about 0.5 m by 1 m in size. They must be generally placed at locations A and B on Figure 2. The material for the transparent sections must be suitable for a use in a damp-to-wet, oily, saline environment at temperatures of -20°C to +30°C.

The tank lid must also have a total of six (6) access ports and supporting assemblies to allow instruments and electrical power cables to be hung through it at each of the locations marked as A and B on Figure 2. Cable glands or other suitable connectors must be attached to the lid at each instrument location.



The instrument access ports and supporting assemblies must be capable of supporting a total weight of equipment (instruments, sampling apparatus at each location of about 100 kg (220 lbs). It is not necessary for the instrument access ports and assembly to be hermetically sealed, but they must provide protection against air leakage through them. The instrument access ports and assembly must be suitable for use in a damp-to-wet, oily, saline environment at temperatures of -20°C to +30°C.

#### 4.3.2 Wall Penetrations for the Tank:

The wall penetrations are intended to allow sampling of the water and fluids in the tank. The wall penetrations will likely be arranged as follows, at the discretion of the ECCC Technical Authority - up to four (4) ports vertically in the tank at four (4) locations marked as A,B,C, and D on Figure 2.

The Contractor must provide leak-proof penetrations at each location each fitted with a cable gland at that allows a sampling vessel (3/8" OD tube) to be inserted through it.

#### 4.3.3 Chassis for the Tank:

A chassis must be provided that can be used to move the tank in and out of the cold room. When the tank is at rest, either in exterior storage or in the cold room, the chassis must be able to be removed or unloaded from under the tank, allowing the tank to sit on either the floor in the exterior storage or the concrete floor in the cold room respectively.

The chassis must include suitable wheels that can be: (a) removed or unloaded when the flume tank is at rest in the cold room; and (b) placed under the tank and/or lift the tank when the tank is to be moved out of, or into, the cold room. The chassis must have wheels that allow the tank to be moved on a concrete floor; as well as on an exterior asphalt surface.

The following criteria apply with respect to the weight of water to be carried by the tank structure:

- (a) the tank will be emptied before moving it; and it will be empty when it is in exterior storage.
- (b) the tank will not be supported by the wheeled chassis when in use in the temperature-controlled room. The tank will be unloaded from the chassis and will sit on the cold room's concrete floor when water is inside the tank.

#### **4.4 Ancillary Equipment for the Next Generation Environmental Simulator**

Table 5 summarizes the ancillary equipment to be provided, and the materials from which they can be made. Electrical power is available within the cold room at voltages of 600V, 208V, and 120 V. The ECCC requires electrical motors exceeding 1 hp to be powered by 600 V.

Furthermore, all ancillary equipment and components must be suitable for use in a damp-to-wet, oily, saline environment, at temperatures from -20°C to +30°C.

**Table 5: Ancillary Equipment to be provided**

Item	General Location	Material
Wave-maker	Integral with the flume tank	Stainless steel for all mechanical, metal parts. If an electric motor is used to power the wave-maker, it must be suitable for use in a damp-to-wet, oily, saline environment.
System to produce currents in the tank	Integral with the flume tank	Stainless steel - If an electric motor is used to drive the current-maker, it must be suitable for use in a damp-to-wet, oily, saline environment.
Mounting system for future UV light	Integral with the flume tank	Stainless steel
Mobile Work platform	Independent from tank – to be put in cold room beside tank	Either stainless steel, aluminum or coated metal - must be suitable for use in a damp-to-wet, oily, saline environment.
Mobile Gantry crane	Independent from tank – to be put in cold room over tank	Either stainless steel, aluminum or coated metal - must be suitable for use in a damp-to-wet, oily, saline environment.
Exterior storage container	Independent from tank – outside the ECCC laboratories	Steel, that is painted and coated appropriately for exterior use
Air Inlet on Tank Lid	In the tank's lid	Stainless steel – the air inlet must be 10 cm (4") high, 10 cm (4") diameter, and be 16 gauge.
Drain on Tank	In the tank wall, as close to the tank bottom as possible	Stainless steel – the drain must be a 10-15 cm (4"-6") long stub with NPS2 female thread welded to the tank wall.
Central Lift and Frame Extension	Over top of the center part of the tank (Figure 1)	Stainless steel – suitable for continuous use over - 20°C to +30°C in a damp-to-wet, oily, saline environment.

#### 4.4.1 Wavemaker:

The contractor must provide a wave-maker that meets the technical requirements specified in Table 4. The wave-maker must be mounted in the "long" end of one side of the flume tank (Figure 2). It must be mounted in a way that allows it to be removed manually.

The wave-maker must include controls that allow the wave period and wave amplitude to be varied independently in user-selected increments with either manually or using a computer. ECCC requires that the wave-maker allow the wave conditions to be set in advance of a test (which could run for up to several weeks), and then be left unchanged for the length of the test.

The wave-maker and its components must be shielded to ensure personnel safety.

#### 4.4.2 System to Produce Currents:

The Contractor must provide a current-maker system that meets the technical requirements specified in Table 4. The current maker must be arranged such that it produces currents that travel either clockwise or counter-clockwise around the flume. The current-maker must not create excessive interference with the wave field or excessive turbulence in the water, such that the interference might cause oil on the surface to become emulsified. The current-maker must be mounted in a way that allows it to be removed manually.

The current-maker must include controls that allow the current to be varied independently in user-selected increments, although it is not necessary to vary it continuously, or during a test. The current-maker must be controllable for currents travelling in either direction. ECCC requires that the current-maker allow the current profile to be set in advance of a test (which could run for up to several weeks), and then to be left unchanged for the length of the test. As with the wave-maker this control must be manual or computer-controlled.

The current-maker and its components must be adequately shielded to ensure operator safety.

#### 4.4.3 Mounting for Future UV Light System:

A mounting system must be supplied for UV lights in a manner that meets the technical requirements specified in Table 4, and at the location shown in Figure 2. The system must be designed such that various lighting arrangements can be installed and removed manually. Provision in design and construction for a future system must be supplied. The contractor is not required to supply a working UV exposure system.

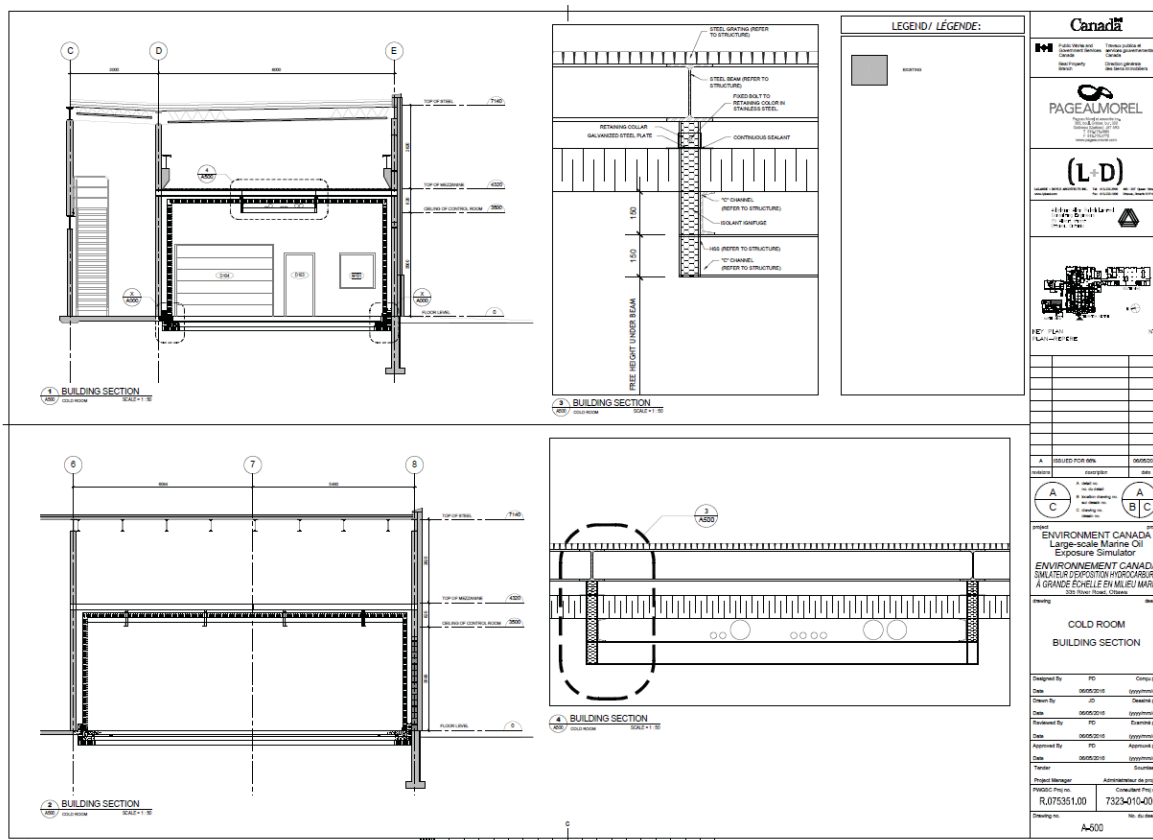
#### 4.4.4 Gantry Crane:

The Contractor must provide one (1) stand-alone, self-supported gantry crane that will fit over the narrow dimension of the flume tank and the work platform (approximately 4.2 m). The crane must be able to be pushed manually by two people along the length of the cold room. The cold room floor will be concrete, and its smoothness will be similar to that of a typical garage floor.

The gantry crane and all of its components must be made from material that is suitable for use in a damp-to-wet, oily, saline environment, at temperatures from -20°C to +30°C. Suitable materials include stainless steel, aluminum, or coated metal.

The gantry crane must be a free-standing, movable unit, capable of straddling the tank and it must span the full width of the cold room, within the space limits defined by the cold room and the various facilities in it. The crane must be designed to maximize the free space in the cold room by:

- a. having a height that maximizes the vertical distance under the gantry crane's top beam.
- b. having the maximum possible span based on the interior layout of the cold room. Figure 3 shows the planned layout of the cold room.
- c. The gantry crane must be equipped with a manually-operated crane/winch which can move along the whole length of the gantry crane's top beam. It must allow for a minimum of 1 m free clearance over the tank with its top lid open and lifted up. The crane/winch and the gantry structure must be capable of safely lifting and supporting 250 kg (550 lbs) of weight.
- d. The gantry crane and its components must ensure operator safety.



**Figure 3: Planned Layout of the Cold Room**  
(ref: Drawing 7323-10-A-500 by Pageau-Morel et Associates Inc.)

#### 4.4.5 Mobile Work Platform:

The Contractor must provide one (1) stand-alone, self-supported work platform that will be placed adjacent to one of the long sides of the flume tank. The work platform must be movable manually by two people on a concrete floor. The work platform must include an apparatus for levelling it on the cold room floor, which is expected to be similar in smoothness to that of a typical garage floor.

The work platform must be made from material that is suitable for use in a damp-to-wet, oily, saline environment. Suitable materials include stainless steel, aluminum, and coated metal. The steps and the working deck of the platform shall be covered with a non-slip surface, suitable for use in a damp-to-wet, oily, saline environment.

The work platform must safely support 455 kg (1000 lbs) of weight. The overall dimensions of the work platform must be 4 m long, 1.1 m high and 1.4 m wide (+/- 0.05 m). The platform must include steps at one end of it for personnel access up to the working deck, as well as a safety hand rail all around its perimeter. The work platform must meet all current safety code requirements applicable to the jurisdiction.

#### 4.4.6 Exterior Storage Container:

The Contractor must provide one (1) exterior, metal-walled, storage container that is large enough to hold the flume tank assembly. The storage container will be placed outside of the ECC's laboratories in a

storage area at the ECCC's facilities at 335 River Road. The exterior storage container must provide all-weather protection for the flume tank and its components.

The container must be supplied with at least one lockable solid-metal door that is large enough to allow the flume tank to pass through, and be stored within the container.

#### 4.4.7 Air Inlet on Tank Lid:

The tank must have an air inlet on its lid, that is 10 cm (4") high and 10 cm (4") diameter. The air inlet must consist of stainless steel with a thickness of at least 16 gauge.

The air inlet must be located generally as shown in Figure 2. See also requirements in section 4.5.3

#### 4.4.8 Drain in Tank Wall:

The tank must have a drain in its wall or tank floor located generally as shown in Figure 2. If on the wall, it must be as close as possible to the bottom of the tank to allow for maximal drainage of the tank.

The drain must consist of a 10-15 cm (4"-6") long stainless steel stub with NPS2 female thread that is welded to the tank shell.

#### 4.4.9 Chassis Lift Frame and Extension:

The tank must have a central chassis lift frame that is generally similar to that shown in Figure 1 to allow the tank lids to be opened manually and supported when open.

In contrast to the configuration shown in Figure 1, the central lift frame must extend to the end of the tank between the inlet and outlet for the air chase (shown in Figure 2). The frame extension must be capable of supporting numerous cables such as electrical supplies, instrumentation, and ethylene glycol lines to the panels in the tank (described in Section 7).

### **4.5 Interface Issues**

The Contractor is advised of the following issues, which relate to the interface between the Next Generation Environmental Simulator, and the building infra-structure that will support it.

#### 4.5.1 Site Access Limitations:

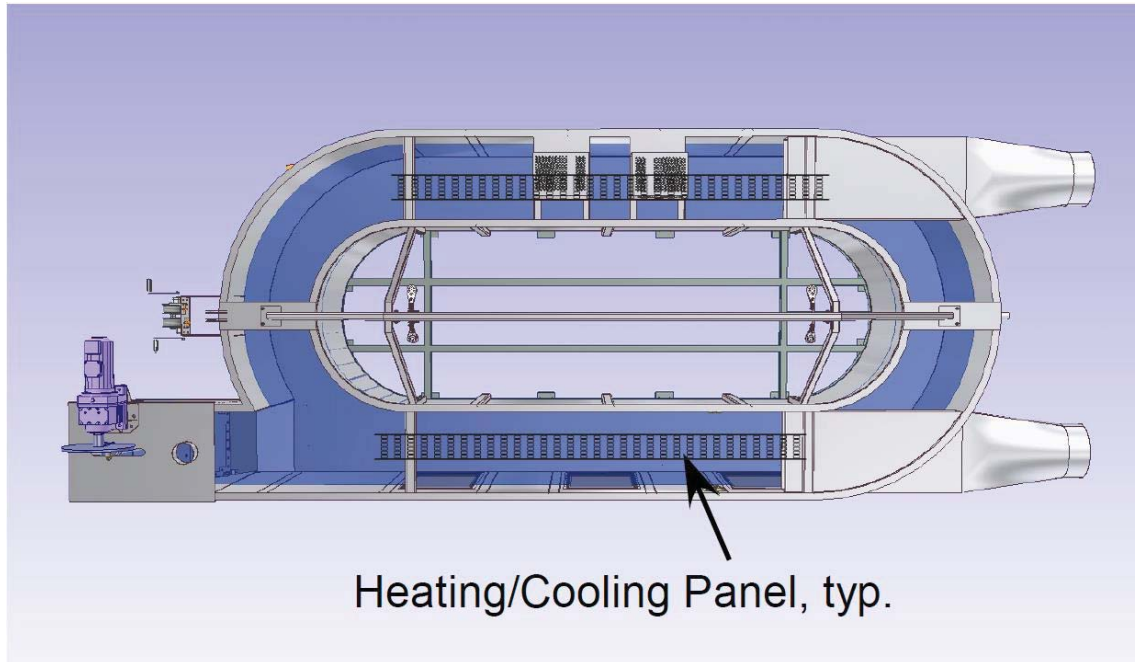
PSPC (Public Services and Procurement Canada) is responsible for the construction and commissioning of the cold room in which the test tank will be housed, as well as all other building infra-structure that will support it. The Contractor will not have access to the cold room and the ECCC's building until the cold room is turned over to ECCC from PSPC. The Contractor will be advised of timings by ECCC at the award of contract. The Contractor must assemble the tank offsite and deliver it to the ECCC's laboratories at 335 River Road for installation and commissioning on a date agreeable to ECCC after the award of contract.

#### 4.5.2 Panels for Heating and Cooling the Water in the Tank:

Panels (also called flat plate, plate coils or immersed heat exchangers), must be included in the tank to allow the water in it to be heated and cooled independently of the air in the cold room. The panels will be supplied by ethylene glycol 50% from the mechanical plant for the cold room. The panels must conform to the parameters as laid out in (Table 6). The Contractor is responsible for:

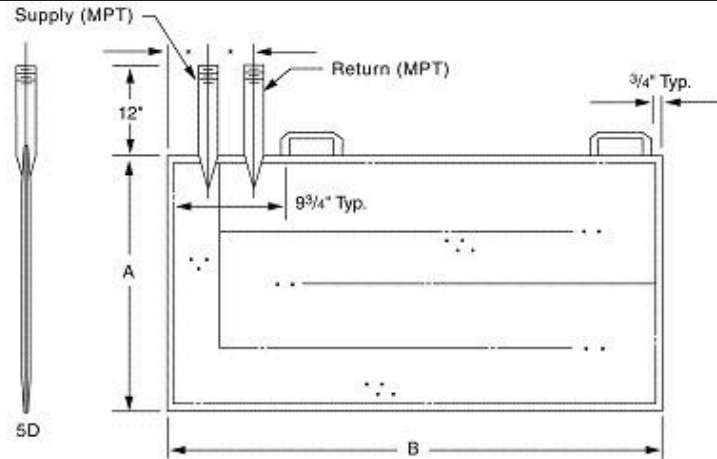
- (a) Procuring the panels specified in Table 6.

- (b) Installing the panels in the tank as shown generally in Figure 4, in a manner that allows them to be removed and re-installed manually (assuming use of the gantry crane). The heat exchangers must be installed in the lower portion of the flume tank.
- (c) Commissioning the panels and insuring that they function as required.



**Figure 4: General Locations for the Heating/Cooling Panels in the Tank**  
(Source for base figure: <http://www.cedre.fr/Nos-prestations/Nos-moyens/Polludrome>)

**Table 6: Specification for the Heating and Cooling Panels in the Test Flume**  
(Source: Pageau Morel Associates Ltd.)



**Quantity:** 2

**Type:** Double Embossed Flat Plate Coil, 2 Pass

**Material:** Titanium (plate and tubing),

**Plates thickness:** 0.889 mm (20 GA)

**Row & Spot Spacing:** 25.4 mm x 25.4 mm (1"x1")

**Pillow Depth:** 2.13 mm (0.084") per side

**Dimensions:** - Height (A): 610mm (24")  
- Length (B): 2,489mm (98")  
- Width (5D) : 127mm (5")

**Design Pressure:** 510 kPa (74 psig)

**Design Temperature:** 93 °C (200 °F)

**MDMT:** -28.8 °C (-20 °F )

**ASME:** YES

**CRN:** Ontario

**Media:** Ethylene Glycol 50%

**Handles:** Yes

**Connections** – Supply: 50mm (2") Schedule 80 x 305mm (12.0"), MPT  
– Return: 50mm (2") Schedule 80 x 305mm (12.0"), MPT

Performances (for each units, both units works in same time)

Fluid side 1 : Ethylene Glycol 50%

Fluid side 2 : Sea Water - (7.0% Brine)

**Table 6 cont'd: Specification for the Heating and Cooling Panels in the Test Flume**

(Source: Pageau Morel Associates Ltd.)

Cooling load	10.9 kW	37,343 BTU/h
Heat Transfer area	3.03 m <sup>2</sup>	32.6 ft <sup>2</sup>
U-Value	261.2 W/m <sup>2</sup> -°K	46 Btu/h-ft <sup>2</sup> -°F
LMTD	13.7 °C	24.7 °F

	Side 1		Side 2	
Flow Rate	1.39 L/s	22 US gpm		
Inlet Temperature	-2,0°C	28.4°F		
Outlet Temperature	0.2°C	32.4°F		
Pressure Drop	117 kPa	17 psi (39 ft H <sub>2</sub> O)		
Density	1059.3 kg/m <sup>3</sup>	8.84 lb/US gal	1048.5 kg/m <sup>3</sup>	8,75 lb/gal
Specific Heat	3.31 kJ/kg-°K	0.79 Btu/lb-°F	3.85 kJ/kg-°K	0.92 Btu/lb-°F
Dynamic Viscosity	0.00843 kg/m s	8.43 cP	0.00128 kg/m s	1.28 cP
Thermal Conductivity	0.419 W/m °K	0.242 Btu/h ft °F	0.559 W/m °K	0.323 Btu/h ft °F

Notes to Table 6:

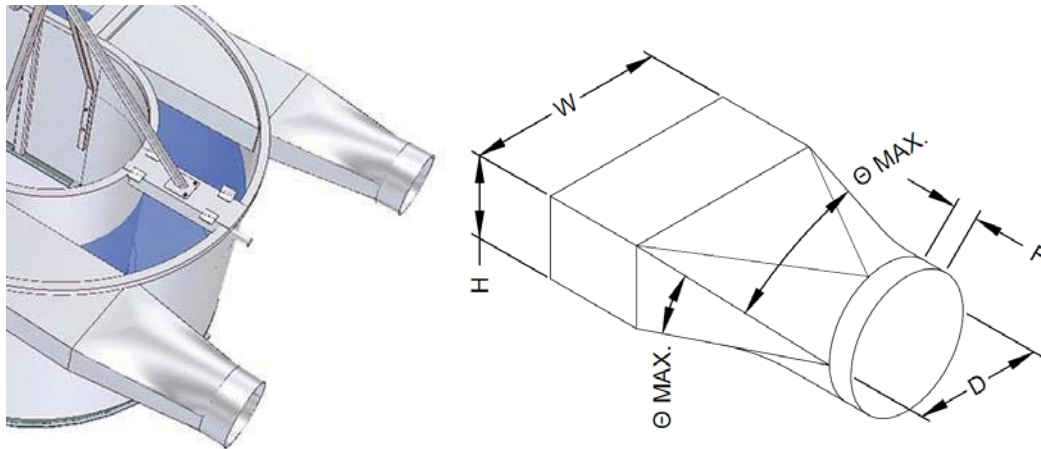
1. The specifications in Table 6 apply to each of the two (2) panels to be supplied.
2. The connections to the inlet and outlet pipes on each of the two (2) panels must be threaded 2" NPT. The inlet and outlet pipes on each of the two (2) panels must be Schedule 10 and consist of stainless steel 316.
3. The inlet and outlet pipes on each of the two (2) panels must be long enough that the threaded connections on each of them are completely above the water in the tank.

#### 4.5.3 The Fan Plenum:

The inlet and outlet ports transitions from the supplied plenum to the flume tank are shown in Figure 5. The Contractor is responsible for:

- (a) providing an air chase above the tank as shown schematically in Figures 1, 2 and 5.
- (b) providing inlet and outlet ports to the air chase with the following shape and dimensions:
  - a. Shape: Symmetrical Rectangular to Round transition, as per SMACNA Standards, thickness of 1.27mm (18 gauge) and Class A seal category.
  - b. Dimensions:
    - i.  $H = (\text{FlumeHeight} - \text{SeawaterDepth})/2$
    - ii.  $W = \text{FlumeWidth}$
    - iii.  $D = 400\text{mm} (16")$
    - iv.  $F = 76.2\text{mm} (3")$
    - v.  $\theta_{\max} = 20^\circ$





**Figure 5: Overview of the inlet and outlet ports transitions of the flume tank**

## 5. Task 2: Construction

Following acceptance of design by ECCC, the Contractor must provide a finalized schedule for construction of the NGES and ancillary equipment.

During construction, the Contractor must provide regular progress reports to ECCC. Written updates on progress must be provided every month of the construction phase. These must include progress to date, any difficulties or variances to the design plan or construction schedule.

At ECCC's discretion, the Contractor must allow ECCC to inspect the NGES and ancillary equipment during construction.

## 6. Task 3: Acceptance Criteria for Next Generation Environmental Simulator and Equipment

Criteria for the Flume Tank in the Next Generation Environmental Simulator:

- The flume tank must be constructed in accordance with the Bidder's design, after it has been approved by the Technical Authority of ECCC.
- The tank must not leak after having water in it for at least 4 weeks; nor after being moved in and out of the cold room at least three times.
- The tank must be able to be moved in and out of the cold room with relative ease. The flume tank must be able to be moved manually by no more than four people on a typical garage floor or an asphalt surface.
- The lid of the tank must provide sealing to prevent vapours from escaping the air chase. Furthermore, the lid must be able to be opened and closed by one to two persons.

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Criteria for the Heating/Cooling Coils in the Next Generation Environmental Simulator:

- (a) The panels must be constructed and installed in accordance with the specified design, by the Technical Authority of ECCC.
- (b) The panels must be able to be put into, and removed from, the flume manually.
- (c) Refrigerant must not leak from the lines to the panels. Also, refrigerant must not leak when the panels are disconnected and re-connected to, the panels in the tank.

Criteria for the Wavemaker in the Next Generation Environmental Simulator:

The wave-maker must meet the requirements defined in this bid specification.

Criteria for the Connection of the Fan Plenum to the Simulator's Air Chase:

- (a) The air chase and its connection points (to the lines from the fan plenum) must be constructed and installed in accordance with the specified design, by the Technical Authority of ECCC.
- (b) The lines from the fan plenum must be able to be connected to, and removed from, the flume's air chase manually.

Criteria for the Pumps or Impeller in the Next Generation Environmental Simulator:

The current generator must meet the requirements defined in this bid specification.

Criteria for the Gantry Crane:

The gantry crane must meet the requirements defined in this bid specification.

Criteria for the Work Platform:

The work platform must meet the requirements defined in this bid specification.

## **7. Task 4: Training**

The Contractor must provide on-site, hands-on training for a minimum of two (2) designated employees of the ESTS of the ECCC. The training period must extend for two (2) days and include but not be restricted to:

- (a) All safety-related aspects of the NGES and its ancillary equipment.
- (b) Operation of all parts of the NGES. This must include the heating and cooling coils for the water, the wave-maker, connection of the fan plenum to the air chase and operating the fans, the UV lights, and the current generation devices.
- (c) Operation of all ancillary equipment. This must include the gantry crane and the mobile platform.

For all of the above, training must be provided with respect to both the mechanical and the software/control aspects of the equipment.

The training will be considered completed when: (a) the contractor has provided on-site, hands-on training for two (2) designated employees of ECCC at ECCC's laboratories, for a period of at least two (2)

days; and (b) the technical authority for ECCC has provided formal notice confirming its agreement of acceptance.

## **8. Task 5: As-Built Drawings and Equipment Manuals**

The Contractor must supply:

- (a) As-built drawings for all equipment; and
- (b) User manuals in English for all equipment.

As-built drawings and equipment manuals must be provided in two hard copies; and also one soft copy, AutoCAD electronic formats.

As-built drawings and equipment manuals must be provided within one (1) month of the date in which the equipment has been installed, commissioned, and accepted by the ESTS of EC.

All of the following acceptance criteria will apply:

- (a) The contractor has provided as-built drawings for all equipment.
- (b) The contractor has provided user manuals in English for all equipment.
- (c) The ESTS has provided formal notice confirming its agreement of acceptance.

## **9. Task 6: Critical Spares**

The Contractor must identify spare parts, as specified below.

- (a) Wave-maker – all moving mechanical parts, including bearings and seals. If an electric motor is used to power the wave-maker, a spare electric motor must be included in the deliverables.
- (b) System to produce currents – all moving mechanical parts, including bearings and seals. If an electric motor is used to power the current-maker, a spare electric motor must be included in the deliverables
- (c) Viewing windows – two spare viewing windows must be included in the deliverables. The tank design must allow viewing windows to be replaced manually.
- (d) Transparent sections for the tank's lid - two spare transparent sections must be included in the deliverables. The tank design must allow transparent sections to be replaced manually.
- (e) Sampling ports for the walls of the tank – sixteen (16) glands or connectors as appropriate (depending on the system used for the instrumentation ports) must be supplied. The tank design must allow sampling ports to be replaced.
- (f) Instrumentation ports for the lid of the tank – six (6) glands or connectors as appropriate (depending on the system used for the instrumentation ports) must be supplied. The tank design must allow instrumentation ports to be replaced.
- (g) Insulation panels – five (5) spare panels must be included in the deliverables.

## 10. Required Delivery Dates

The following delivery dates are desired, although the Contractor should note that the schedule may be affected by access limitations as described in Section 7.

- (a) Design:
  - a. Project Review when the design is 50% complete: 4 weeks after contract award
  - b. Design submitted to ECCC: 6 weeks after contract award
  - c. Presentation of Design and provisional construction schedule to ECCC: 7 weeks after contract award
  - d. Review by ECCC completed: 8 weeks after contract award
- (b) Go/No Go Point (Design accepted by ECCC): 9 weeks after contract award (1 week allowed for possible revisions to design). Acceptance of finalized construction schedule.
- (c) Meso-Scale Simulator delivered to ECCC's laboratories: 21 weeks after contract award
- (d) Meso-Scale Simulator installed and commissioned in ECCC's laboratories: 22 weeks after contract award
- (e) Training completed: 24 weeks after contract award
- (f) As-built drawings and user manuals provided: 25 weeks after contract award
- (g) Spares delivered to ECCC's laboratories: 25 weeks after contract award.

## 11. References

- [1] Comfort, G., 2015, Investigation for Meso-Scale Marine Oil Simulator, contractor report 135 submitted by G. Comfort Ice Engineering Ltd. to the ESTS.
- [2] GWA, 2016, 335 River Road Large-Scale Marine Oil Exposure Simulator – Location Feasibility Study, PWGSC Project #R.075351.001, contractor report GWA 2015-448 submitted by Goodkey, Weedmark and Associates Ltd. to PWGSC Jan. 12, 2016.

Solicitation No. - N° de l'invitation  
K4A22-170118/A  
Client Ref. No. - N° de réf. du client  
K4A22-170118

Amd. No. - N° de la modif.  
File No. - N° du dossier  
pv915, K4A22-170118

Buyer ID - Id de l'acheteur  
pv915  
CCC No./N° CCC - FMS No./N° VME

## Part 2 - EVALUATION CRITERIA

### TABLE

Bidders are requested to cross reference the mandatory technical criteria in a concise format by using page, paragraph(s) & sub-paragraphs as applicable to their supporting technical documentation.

ITEM	CRITERIA	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
M.1	Licensing, Certification or Authorization	
M.2	Sample Projects	

ITEM	CRITERIA	REFERENCE TO SUBSTANTIATION IN THE TECHNICAL BID
R1	Achievements of Bidder on Past Projects	
R2	Understanding of the Project	
R3	Approach and Methodology	
R4	Scope and Capability	
R5	Achievements of Key Personnel	

---

## Part 2.1 - MANDATORY TECHNICAL EVALUATION CRITERIA

The following requirements are the mandatory technical evaluation criteria which will be evaluated during the Bid Evaluation. In addition, the Contractor will be required to meet all of the mandatory technical requirements for the duration of the Contract.

### Mandatory Requirements

#### M.1: Licensing, Certification or Authorization

The Bidder MUST provide proof of license for any necessary professional services including engineering to the full extent that may be required by provincial law in the province of Ontario.

#### M.2: Sample Projects

The Bidder MUST submit a minimum of two and no more than three comparable\* projects to demonstrate its previous achievements and experience.

Each of the projects MUST have been completed\*\* within the ten years preceding the bid solicitation's closing date.

The Bidder MUST provide the following information for each of its submitted projects:

- Project Name
- Project Scope
- Client Name
- Start Date
- End date

#### NOTES

1. \*Comparable is defined as a project of design, engineering and fabrication in hydraulic engineering, environmental simulation or a relevant equivalent field.
2. \*\*Completed is defined as a project that was delivered and accepted by the client.
3. These projects will be evaluated under Point rated evaluation criterion R.1;
4. Only the first three projects listed in sequence in the bid will be evaluated (any others will not be evaluated); and
5. If in joint venture, the submissions are not to exceed a total of three projects.

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## Part 2.2 - POINT RATED EVALUATION CRITERIA

The following requirements are the point-rated technical evaluation criteria which will be evaluated during the Bid Evaluation using the evaluation grid in Annex "C".

In all cases, where "mean" points are to be calculated, the arithmetic mean will be used. It is computed by adding the values and dividing by the number of values

### Rated Requirements

#### R.1: Achievements of Bidder on Past Projects

For each project listed in M.2, the Bidder should demonstrate the following information using the following format:

##### SECTION I: BACKGROUND INFORMATION AND SIMILARITY

1. Explanation of project and intent.
2. Explanation of how this project is comparable or relevant to the project described in this SOW.

##### SECTION II: BIDDER SERVICES

1. Description of the services provided by the Bidder that enabled its client to meet its requirements.

##### SECTION III: APPROACH

1. Explanation of the Bidder's design philosophy and approach to meet the intent, design challenges and resolutions.

##### SECTION IV: PROJECT EXECUTION

1. Description of the Bidder's budget control and management activities, and an explanation of any variations between expected and actual costs.
2. Description of the Bidder's project schedule control and management activities, and an explanation of any variations between initial schedule and final schedule.
3. Names of key personnel responsible for project delivery.

##### SECTION V: RESULTS

1. Explanation of the project's success factors and how the Bidder met them.
2. Description of any awards received.

#### R.2: Understanding of the Project

The Bidder should demonstrate its understanding of the project, including each of the following elements:

- Functional and technical requirements as listed in Tasks 1 through 6 of the statement of work;
- Schedule and cost requirements; and
- Broader goals, including considerations to allow adaption or modification of the tank and equipment in the future.

NOTE: Simply repeating the Statement of Work, in whole or in part, does not indicate an understanding of the project.

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### **R.3 Approach and Methodology**

The Bidder should describe:

- Its design philosophy, approach or methodology to address the unique aspects of the current project;
- Aspects of the project it considers to be a major challenge, including design issues;
- A risk analysis of those factors which might affect project schedule or cost; and
- Mitigation strategies to compensate for identified risk factors.

### **R.4 Scope and Capability**

The Bidder should demonstrate their capability to perform the project services by providing a detailed Project Work Plan that should include each of the following elements:

- How the Bidder proposes to perform the services offered and meet the all the Tasks required in the Statement of Work. This should include work plans for each Task and deliverable.
- Schedule covering all Tasks and deliverables
- Bidder's proposed Project team, including the following:
  - Name, role and responsibilities/assignments of each team member
  - Organization chart
  - Use of subcontractors (if any)
  - If a joint venture is being proposed, the Bidder should provide the team structure and responsibilities for all joint venture members.
- Management structure to ensure quality of work.

### **R5: Achievements of Key Personnel**

The Bidder should include the following information for key personnel, for example, those individuals identified as part of the management structure or as project specialists in R.4:

- Role for which the individual is being proposed.
- Number of years of relevant experience in the role(s) to which they will be active in the project;
- Summary of formal education, professional accreditations, related professional development, and awards (N.B. Professional development includes demonstrated efforts to maintain and upgrade skills and knowledge; it does not, for example, include reading trade publications but could include teaching in a relevant field. Relevant awards and prizes will be evaluated as long as the specific role of the individual in the project that received the reward is described.); and
- Experience relevant to their proposed role on projects completed within the last ten years (as of bid closing date) that demonstrate the individual's expertise in their field. Each example should provide a brief description of the individual's role and contribution.



**ANNEX B**  
**PRICING TABLES**

The Bidder should provide a cost breakdown, using the tables provided under B.1- Cost Breakdown

**B.1 Cost Breakdown**

**Table 1.1: Hourly Rates of key personnel**

The bidder should provide firm hourly rates for the key personnel named under R.4

Category of personnel (individual names not required)	Hourly rate (\$)	Level of effort (# of hours)	Total (\$ X number of hours)
			\$
			\$
			\$
			\$
<b>Total</b>	<b>\$</b>		

**Table 1.2: Other Professionals Hourly rates**

This section should be completed by the Bidder who would like to identify other categories of personnel to be used during the contract period.

Category of professionals (individual names not required)	Hourly rate (\$)	Level of effort (# of hours)	Total (\$ X number of hours)
			\$
			\$
			\$
<b>Total</b>	<b>\$</b>		

**Table 1.3: Sub contractors**

The Bidder should provide an estimated cost, excluding GST/HST, for direct and subcontracted expenses for the contract period..

Subcontractor	Cost (\$)
<b>Total</b>	<b>\$</b>

**Table 1.4: Material**

The Bidder should provide an estimated cost, excluding GST/HST, for materials for the contract period.

Material	Cost (\$)
<b>Total</b>	<b>\$</b>

**Table 1.5: Other Costs**

The Bidder should provide an estimated cost, excluding GST/HST, for any other costs for the contract period.

Other	Cost (\$)

Solicitation No. - N° de l'invitation  
K4A22-170118/A  
Client Ref. No. - N° de réf. du client  
K4A22-170118

Amd. No. - N° de la modif.  
File No. - N° du dossier  
pv915. K4A22-170118

Buyer ID - Id de l'acheteur  
pv915  
CCC No./N° CCC - FMS No./N° VME

<b>Total</b>	<b>\$</b> _____
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## B.2 FIRM ALL INCLUSIVE PRICE

The following table is the firm all inclusive price submitted by the Bidder for the initial contract period and for each additional option years.

The Bidder must provide all of the pricing requested in the following Tables 1 and 2 in accordance with **Article 6.7.1 - Basis of Payment.**

**Table 1: Initial Requirement:**

Item	Description	Number of Units	Unit of Issue	Firm Unit Price
1	Design, construction, installation, training, 2-year warranty, drawings, training manuals, and critical spare parts	1	Lot	\$
				Evaluated Price

**Table 2: Optional Requirement:**

Item	Description	Firm Unit Price
1	Optional Year 1 of extended Warranty	\$
2	Optional Year 2 of extended Warranty	\$
3	Optional Year 3 of extended Warranty	\$
	Evaluated Price	Sum of Items 1, 2 and 3

**Table 3: Total Aggregated Bid Price:**

Item	Description	Evaluated Price
1	Table 1: Initial Requirement	As per Evaluated Price from Table 1
2	Table 2: Optional Requirement	As per Evaluated Price from Table 2
3	Total Aggregated Bid Price	Sum of Tables 1 and 2

**ANNEX “C”**  
**EVALUATION GRID**

**Bidder:** \_\_\_\_\_

<b>EVALUATION SUMMARY</b>		
<b>MANDATORY REQUIREMENTS:</b> <input type="checkbox"/> <b>MET</b> <input type="checkbox"/> <b>NOT MET</b>		
<b>Rated Requirements</b>	<b>Minimum Points Required</b>	<b>Maximum Points</b>
<b>R.1 Achievements of Bidder on Past Projects</b>	<b>(24)</b>	<b>(40)</b>
<ul style="list-style-type: none"> <li>○ <b>R.1.1</b> Background information and similarity</li> <li>○ <b>R.1.2</b> Bidder Services</li> <li>○ <b>R.1.3</b> Approach</li> <li>○ <b>R.1.4</b> Project Execution</li> <li>○ <b>R.1.5</b> Results</li> </ul>	3 3 6 6 6	5 5 10 10 10
<b>R.2 Understanding of the Project</b>	<b>(18)</b>	<b>(30)</b>
<ul style="list-style-type: none"> <li>○ <b>R.2.1</b> Functional and technical requirements</li> <li>○ <b>R.2.2</b> Schedule and cost requirements</li> <li>○ <b>R.2.3</b> Broader goals</li> </ul>	6 6 6	10 10 10
<b>R.3 Approach and Methodology</b>	<b>(18)</b>	<b>(30)</b>
<ul style="list-style-type: none"> <li>○ <b>R.3.1</b> Design philosophy, approach or methodology</li> <li>○ <b>R.3.2</b> Major challenges</li> <li>○ <b>R.3.3</b> Risk analysis</li> <li>○ <b>R.3.4</b> Mitigation strategies</li> </ul>	3 3 6 6	5 5 10 10
<b>R.4 Scope and Capability</b>	<b>(42)</b>	<b>(70)</b>
<ul style="list-style-type: none"> <li>○ <b>R.4.1</b> work plans</li> <li>○ <b>R.4.2</b> schedule</li> <li>○ <b>R.4.3</b> proposed Project team,</li> <li>○ <b>R.4.4</b> Proposed management structure</li> </ul>	18 12 6 6	30 20 10 10
<b>R.5 Achievements of Key Personnel</b>	<b>(18)</b>	<b>(30)</b>
<ul style="list-style-type: none"> <li>○ <b>R.5.1</b> Number of years</li> <li>○ <b>R.5.2</b> Summary of qualifications</li> <li>○ <b>R.5.3</b> Examples</li> </ul>	6 6 6	10 10 10
<b>OVERALL TOTAL</b>	<b>120</b>	<b>200</b>

The following scoring grid will be used for the evaluation of Rated Requirements 1 to 5 inclusively with the exception of R.5.1.

Percentage	Rating Level
0%	Little or no information provided to assess the Bidder's ability to meet the criteria.
40%	<b>Limited.</b> Very limited information was provided to assess the Bidder's ability to meet the criteria. There are serious discrepancies and/or deficiencies that pose important risks to the requirement.
60%	<b>Weak.</b> Information was provided, but with only partial description of the Bidder's ability to meet the criteria. There are discrepancies and/or deficiencies that pose some risks to the requirement.
75%	<b>Satisfactory.</b> Good description provided of the Bidder's ability to meet the criteria. Minimal weaknesses and/or deficiencies could exist, but would not pose any significant risk to the requirement.
90%	<b>Excellent.</b> Complete and clear description provided of the Bidder's ability to meet the criteria. No evident weaknesses or deficiencies that would pose any risk to the requirement.
100%	<b>Exceptional.</b> Complete and clear description provided that goes beyond the Bidder's ability to meet the criteria. No weaknesses or deficiencies that would pose any risk to the requirement.

**R.1: Achievements of Bidder on Past Projects** (Maximum: 40 points, minimum: 24 points)

This requirement will be evaluated using the information provided in the two or three projects submitted.

Individual scores will be calculated for each past project example submitted. The final score for R.1 will be computed as the mean of the total project scores.

The following rated criteria will be used for evaluation:

<b>Requirement 1 – Achievements of Bidder on Past Projects – up to a maximum of 40 points</b>			
	<b>Assessment of Criteria</b>		<b>Points</b>
<b>R.1.1</b>	<b>SECTION I: BACKGROUND INFORMATION AND SIMILARITY</b> 1. Explanation of project and intent.  2. Explanation of how this project is comparable or relevant to the project described in this SOW.		Project 1: / 5  Project 2: / 5  Project 3 (if reqd): / 5  <b>Mean: / 5</b>
<b>R.1.2</b>	<b>SECTION II: BIDDER SERVICES</b> 1. Description of the services provided by the Bidder that enabled its client to meet its requirements.		Project 1: / 5 Project 2: / 5 Project 3 (if reqd): / 5 <b>Mean: / 5</b>
<b>R.1.3</b>	<b>SECTION III: APPROACH</b> 1. Explanation of the Bidder's design philosophy and approach to meet the intent, design challenges and resolutions.		Project 1: / 10 Project 2: / 10 Project 3 (if reqd): / 10 <b>Mean: /10</b>
<b>R.1.4</b>	<b>SECTION IV: PROJECT EXECUTION</b> 1. Description of the Bidder's budget control and management activities, and an explanation of any variations between expected and actual costs.  2. Description of the Bidder's project schedule control and management activities, and an explanation of any variations between initial schedule and final schedule.  3. Names of key personnel responsible for project delivery.		Project 1: / 10  Project 2: / 10  Project 3 (if reqd): / 10  <b>Mean: /10</b>
<b>R.1.5</b>	<b>SECTION V: RESULTS</b> 1. Explanation of the project's success factors and how the Bidder met them.  2. Description of any awards received.		Project 1: / 10 Project 2: / 10 Project 3 (if reqd): / 10 <b>Mean: /10</b>
<b>Total mean scores</b>			<b>/ 40</b>

**R.2: Understanding of the Project** (Maximum: 30 points, minimum: 18 points)

This requirement will be evaluated based on the degree to which the Bidder demonstrated an understanding of the project.

The following rated criteria will be used for evaluation:

<b>Requirement 2 – Understanding of the Project – up to a maximum of 30 points</b>			
	<b>Assessment of Criteria</b>	<b>Percentage</b>	<b>Points</b>
<b>R.2.1</b>	The bidder demonstrates an understanding of the functional and technical requirements as listed in Tasks 1 through 6 of the statement of work.		/ 10
<b>R.2.2</b>	The bidder demonstrates an understanding of the Schedule and cost requirements		/ 10
<b>R.2.3</b>	The bidder demonstrates an understanding of the Broader goals, including considerations to allow adaption or modification of the tank and equipment in the future.		/ 10
<b>Total</b>			<b>/ 30</b>

**R.3 Approach and Methodology** (Maximum: 30 points, minimum: 18 points)

This requirement will be evaluated based on the degree to which the Bidder described its approach and methodology for this requirement.

The following rated criteria will be used for evaluation:

<b>Requirement 3 – Approach and Methodology – up to a maximum of 30 points</b>			
	<b>Assessment of Criteria</b>	<b>Percentage</b>	<b>Points</b>
<b>R.3.1</b>	The Bidder described its design philosophy, approach or methodology to address the unique aspects of the current project;		/ 5
<b>R.3.2</b>	The Bidder described aspects of the project it considers to be a major challenge, including design issues		/ 5
<b>R.3.3</b>	The Bidder described a risk analysis of those factors which might affect project schedule or cost		/ 10
<b>R.3.4</b>	The Bidder described mitigation strategies to compensate for identified risk factors		/ 10
<b>Total</b>			<b>/ 30</b>

#### R.4 Scope and Capability (Maximum: 70 points, minimum: 42 points)

This requirement will be evaluated based on the degree to which the Bidder demonstrated its capability to perform the services required.

The following rated criteria will be used for evaluation:

Requirement 4 – Capability – up to a maximum of 70 points			
	Assessment of Criteria	Percentage	Points
R.4.1	The Bidder demonstrated how it proposes to perform the services offered and meet the all the Tasks required in the Statement of Work. This should include work plans for each Task and deliverable.		/ 30
R.4.2	The bidder demonstrated their capability to perform the project services by providing a schedule covering all Tasks and deliverables		/ 20
R.4.3	The bidder demonstrated their capability to perform the project services by providing a proposed Project team, including the following: <ul style="list-style-type: none"> <li>o Name, role and responsibilities/assignments of each team member</li> <li>o Organization chart</li> <li>o Use of subcontractors (if any)</li> <li>o If a joint venture is contracted, the Bidder should provide the team structure and responsibilities for all joint venture members.</li> </ul>		/ 10
R.4.4	The bidder demonstrated their capability to perform the project services by providing a management structure to ensure quality of work.		/ 10
Total			/ 70

**R5: Achievements of Key Personnel** (Maximum: 30 points, minimum: 18 points)

This requirement will be evaluated based on the degree to which the Bidder demonstrated that the key personnel's experience and expertise is relevant and will contribute to the success of to this requirement.

If more than one individual is evaluated, the mean score for all individuals will be used.

For criterion **R.5.3**, the technical score will be the mean total points of all examples submitted.

The following rated criteria will be used for evaluation:

<b>Requirement 5 – Achievements of Key Personnel – up to a maximum of 30 points</b>			
	<b>Assessment of Criteria</b>	<b>Percentage</b>	<b>Points</b>
R.5.1	Number of years of relevant experience in the role(s) to which they will be active in the project.  <b>0 points for less than 2 years, 4 points for 2-5 years, 8 points for 5-9 years, 10 points for 9 + years, for a possible total of 10 points.</b>	N/A	/ 10 Points
R.5.2	Relevance of formal education, professional accreditations, related professional development, and awards (N.B. Professional development includes demonstrated efforts to maintain and upgrade skills and knowledge; it does not, for example, include reading trade publications but could include teaching in a relevant field. Relevant awards and prizes will be evaluated as long as the specific role of the individual in the project that received the reward is described.);		/ 10 Points
R.5.3	Experience relevant to their proposed role on projects completed within the last ten years (as of bid closing date) that demonstrate the individual's expertise in their field. Each example should provide a brief description of the individual's role and contribution.  <b>10 points per example. If more than one example is evaluated, the mean score will be used.</b>		Ex. 1 / 10 points  Ex. 2 / 10 points  <b>Mean : / 10 points</b>
			<b>/30 points</b>



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**FORM 1**

**FORMER PUBLIC SERVANT**

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

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes ( ) No ( )**

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

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

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

**Work Force Adjustment Directive**

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes ( ) No ( )**

If so, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

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

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File No. - N° du dossier  
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Buyer ID - Id de l'acheteur  
pv915  
CCC No./N° CCC - FMS No./N° VME

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**FORM 2**

**COMPLETE LIST OF DIRECTORS**  
**(As per Standard Instructions, Clauses and Conditions Part 2)**

Name	Position
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**FORM 3 to PART 3 OF THE BID SOLICITATION**

**ELECTRONIC PAYMENT INSTRUMENTS**

The Bidder accepts any of the following Electronic Payment Instrument(s):

- ( ) VISA Acquisition Card;
- ( ) MasterCard Acquisition Card;
- ( ) Direct Deposit (Domestic and International);
- ( ) Electronic Data Interchange (EDI);
- ( ) Wire Transfer (International Only);

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**FORM 4 to PART 5 OF THE BID SOLICITATION**

**FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION**

I, the Bidder, 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 bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid 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: \_\_\_\_\_ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- ☐ A1. The Bidder certifies having no work force in Canada.
- ☐ A2. The Bidder certifies being a public sector employer.
- ☐ A3. The Bidder certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- ☐ A4. The Bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

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

**OR**

- ☐ A5.2. The Bidder 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 Bidder is not a Joint Venture.

**OR**

- ☐ B2. The Bidder is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed Form 4 Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

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Buyer ID - Id de l'acheteur  
pv915  
CCC No./N° CCC - FMS No./N° VME

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## FORM 5 to ANNEX A

### Customer References

#### Project 1:

Client organization:  
Client contact name:  
Title:  
Address:  
Telephone:  
Email:

#### Project 2:

Client organization:  
Client contact name:  
Title:  
Address:  
Telephone:  
Email:

#### Project 3:

Client organization:  
Client contact name:  
Title:  
Address:  
Telephone:  
Email: