

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Réception des soumissions - TPSGC / Bid
Receiving - PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet Oceanographique Station	
Solicitation No. - N° de l'invitation 5P212-110919/A	Date 2012-05-24
Client Reference No. - N° de référence du client 5P212-11-0919	
GETS Reference No. - N° de référence de SEAG PW-\$QCN-026-14640	
File No. - N° de dossier QCN-2-35105 (026)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-07-04	
Time Zone Fuseau horaire Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: St-Laurent, Karine	Buyer Id - Id de l'acheteur qcn026
Telephone No. - N° de téléphone (418) 649-2752 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: PARC MARIN DU SAGUENAY SAINT-LAURENT 454 DU BATEAU PASSEUR TADOUSSAC Québec G0T2A0 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

TPSGC/PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

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

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The requirement is detailed under the Annex "A".

3. Debriefings

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

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

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

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

The 2003 (2012-03-02) 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: sixty (60) days

Insert: one hundred and twenty (120) days

1.1 SACC Manual Clauses

B1000T (2007-11-30), Condition of Material

2. Submission of Bids

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

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **seven (7) calendar days** before the bid closing date. Enquiries received after that time may not be answered.

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

4. Applicable Laws

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

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

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

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

Section I: Financial Bid (1 hard copy)
Section II: Certifications (1 hard copy)

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

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

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

Section I: Financial Bid

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

1.1 SACC Manual Clauses

C3011T(2010-01-11), Exchange Rate Fluctuation

Section II: Certification

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

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

1.1 Financial Evaluation

1. The price of the bid will be evaluated as follows:
 - a. Canadian-based bidders must submit firm prices, Canadian customs duties and excise taxes included, and Goods and Services Tax (GST) or Harmonized Sales Tax (HST) excluded.
 - b. foreign-based bidders must submit firm prices, Canadian customs duties, excise taxes and GST or HST excluded. Canadian customs duties and excise taxes payable by Canada will be added, for evaluation purposes only, to the prices submitted by foreign-based bidders.
2. 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.
3. Although Canada reserves the right to award the Contract either on an FOB plant or FOB destination, Canada requests that bidders provide prices FOB their plant or shipping point and FOB destination. Bids will be assessed on an FOB destination basis.
4. For the purpose of the bid solicitation, bidders with an address in Canada are considered Canadian-based bidders and bidders with an address outside of Canada are considered foreign-based bidders.

2. Basis of Selection

A bid must comply with all requirements of the bid solicitation to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

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

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

1. Certifications Precedent to Contract Award

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

1.1 Federal Contractors Program - over \$25,000 and below \$200,000

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

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

The Bidder or the member of the joint venture

- (a) () is not subject to the FCP, having a workforce of less than 100 full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada;
- (b) () is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c. 44;
- (c) () is subject to the requirements of the FCP, having a workforce of 100 or more full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC, having not bid on requirements of \$200,000 or more;

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

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

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The Contractor must provide the items detailed under the "Requirement" at Annex "A".

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the *Standard Acquisition Clauses and Conditions*

(<http://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>)

Manual issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2012-03-02), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

Subsection **8** of **2010A**, General Conditions - Goods (Medium Complexity), is amended as follows:

All the Work is subject to inspection and acceptance by Canada. **Given the particular nature of the Work, we estimate that its inspection and acceptance could take up to 60 days.** Inspection and acceptance of the Work by Canada do not relieve the Contractor of its responsibility for defects or other failures to meet the requirements of the Contract. **Canada will have the right to reject any work that is not in accordance with the requirements of the Contract and require its correction or replacement at the Contractor's expense.**

2030 27 (2012-03-02), General Conditions - Higher Complexity - Goods apply to and form part of the Contract.

Intellectual Property Infringement and Royalties

1. The Contractor represents and warrants that, to the best of its knowledge, neither it nor Canada will infringe any third party's intellectual property rights in performing or using the Work, and that Canada will have no obligation to pay royalties of any kind to anyone in connection with the Work.
2. If anyone makes a claim against Canada or the Contractor concerning intellectual property infringement or royalties related to the Work, that Party agrees to notify the other Party in writing immediately. If anyone brings a claim against Canada, according to Department of Justice Act, R.S. 1985, c. J-2, the Attorney General of Canada must have the regulation and conduct of all litigation for or against Canada, but the Attorney General may request that the Contractor defend Canada against the claim. In either case, the Contractor agrees to participate fully in the defence and any settlement negotiations and to pay all costs, damages and legal costs incurred or payable as a result

of the claim, including the amount of any settlement. Both Parties agree not to settle any claim unless the other Party first approves the settlement in writing.

3. The Contractor has no obligation regarding claims that were only made because:
 - a. Canada modified the Work or part of the Work without the Contractor's consent or used the Work or part of the Work without following a requirement of the Contract; or
 - b. Canada used the Work or part of the Work with a product that the Contractor did not supply under the Contract (unless that use is described in the Contract or the manufacturer's specifications); or
 - c. the Contractor used equipment, drawings, specifications or other information supplied to the Contractor by Canada (or by someone authorized by Canada); or
 - d. the Contractor used a specific item of equipment or software that it obtained because of specific instructions from the Contracting Authority; however, this exception only applies if the Contractor has included the following language in its own contract with the supplier of that equipment or software: "[Supplier name] acknowledges that the purchased items will be used by the Government of Canada. If a third party claims that equipment or software supplied under this contract infringes any intellectual property right, [supplier name], if requested to do so by either [Contractor name] or Canada, will defend both [Contractor name] and Canada against that claim at its own expense and will pay all costs, damages and legal fees payable as a result of that infringement." Obtaining this protection from the supplier is the Contractor's responsibility and, if the Contractor does not do so, it will be responsible to Canada for the claim.
4. If anyone claims that, as a result of the Work, the Contractor or Canada is infringing its intellectual property rights, the Contractor must immediately do one of the following:
 - a. take whatever steps are necessary to allow Canada to continue to use the allegedly infringing part of the Work; or
 - b. modify or replace the Work to avoid intellectual property infringement, while ensuring that the Work continues to meet all the requirements of the Contract; or
 - c. take back the Work and refund any part of the Contract Price that Canada has already paid.

If the Contractor determines that none of these alternatives can reasonably be achieved, or if the Contractor fails to take any of these steps within a reasonable amount of time, Canada may choose either to require the Contractor to do (c), or to take whatever steps are necessary to acquire the rights to use the allegedly infringing part(s) of the Work itself, in which case the Contractor must reimburse Canada for all the costs it incurs to do so.

3.2 Supplemental General Conditions

4003 (2010-08-16), Supplemental General Conditions - Licensed Software apply to and form part of the Contract;

4004 (2010-08-16), Supplemental General Conditions - Maintenance and Support Services for Licensed Software apply to and form part of the Contract.

Solicitation No. - N° de l'invitation

5P212-110919/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

qcn026

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

5P212-11-0919

File No. - N° du dossier

QCN-2-35105

CCC No./N° CCC - FMS No/ N° VME

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before **six weeks after contract award**.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Organization: **Public Works and Government Services Canada**

Address: 601-1550, D'Estimauville Avenue
Québec, Québec
G1J 0C7
Canada

Name: Karine St-Laurent
Title: Procurement Officer
Telephone: 418.649.2752
Facsimile: 418.648.2209
E-mail: karine.st-laurent@tpsgc-pwgsc.gc.ca

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

5.2 Technical Authority *(to be completed at contract award)*

The Technical Authority for the Contract is :

Organization: **Parks Canada**

Address: _____

Name: _____
Title: _____
Telephone: _____
Facsimile: _____
E-mail: _____

The Technical Authority named above is the representative of the department or agency for whom the

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

5.3 Contractor's Representative (to be completed at contract award)

Organization: _____

Address: _____

Name: _____

Title: _____

Telephone: _____

Facsimile: _____

E-mail: _____

6. Payment

6.1 Basis of Payment - Firm Price

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 - Basis of payment for a cost of \$ _____ (insert the amount at contract award). Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

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.

6.2 Single Payment

SACC Manual Clause H1000C (2008-05-12), Single Payment

6.3 SACC Manual Clauses

C2000C (2007-11-30), Taxes - Foreign-based Contractor

6.4 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered:

- (a) Free on Board (Destination) common carrier Tadoussac, Québec, Canada for shipments from the United States government; or
- (b) Delivered Duty Paid (DDP) Tadoussac, Québec, Canada Incoterms 2000 for shipments from a commercial contractor.

7. 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:

The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

8. Certifications

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

9. Applicable Laws

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

10. Priority of Documents

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

- (a) the Articles of Agreement;
- (b) 4003 (2010-08-16), Supplemental General Conditions - Licensed Software;
- (c) 4004 (2010-08-16), Supplemental General Conditions - Maintenance and Support Services for Licensed Software;
- (d) 2030 27 (2012-03-02), General Conditions - Higher Complexity - Goods - Intellectual Property Infringement and Royalties;
- (e) 2010A (2012-03-02), General Conditions - Goods (Medium Complexity);
- (f) Annex A, Requirement;
- (g) Annex B, Basis of Payment;
- (h) Annex C, Underwater Oceanographic Station Concept;
- (i) the Contractor's bid dated _____ (*insert date of bid*).

11. SACC Manual Clauses

G1005C (2008-05-12), Insurance

ANNEX "A"

REQUIREMENT

UNDERWATER OCEANOGRAPHIC STATION

OBJECTIVE

The Marine Environment Discovery Centre requires measuring equipment to assemble a functional and complete land-linked underwater oceanographic station permitting oceanographic diving conditions to be transmitted, recorded and analyzed in order to brief divers.

CONTEXT

Managed by Parks Canada's Saguenay-St. Lawrence Field Unit, the Marine Environment Discovery Centre was essentially created to increase diver safety on an existing scuba site in Les Escoumins. Located along the shore, the site provides land access to the busiest St. Lawrence dive site.

The Marine Environment Discovery Centre's infrastructure includes three walkways and diving ramps connected by an underwater cable that facilitates access to the exit, a map profiling the seabed, a dive flag and an oxygen therapy kit. Personnel are also present on site.

The underwater oceanographic station will have to provide data relative to oceanic conditions including current speeds and directions, wave heights and directions, water temperature and underwater visibility through water turbidity analysis.

The required underwater oceanographic station must be equipped with an Acoustic Doppler Current Profiler (ADCP), a turbidity sensor, an underwater platform, an interface box, power and data cables, connectors, tension reduction strands and software.

The ADCP and turbidity sensor will be fastened to the underwater platform, which will be anchored or deposited on the sea floor at the Marine Environment Discovery Centre dive site and linked by cables (for power supply and the data transmission). Data will be transmitted in real-time to a computer directly on the dive site, on the Marine Park website and on the St. Lawrence Global Observatory website. Collected data will enable divers to remotely or on location consult oceanographic conditions in order to enable divers to know underwater diving conditions and make informed decisions for their safety and to plan their dives.

All material and equipment must support a marine environment and 40 m of water column pressure. The station will be submerged to a depth of between 15 and 25 m. Assembling and installing the equipment of the underwater oceanographic station is not part of the requirement.

ACRONYMS

- ADCP: Acoustic Doppler Current Profiler;
- cm: centimeter;
- kg: kilogram;
- kHz: kilohertz;
- m: meter;
- MB: megabyte;
- nm: nanometer;
- V: volt.

The equipment must include:

- An Acoustic Doppler Current Profiler (ADCP) - wave measuring device to measure ocean current speed and direction, wave height and direction and water temperature in real time;
- A transmissometer-type turbidity sensor to measure water turbidity in real time;
- A tripod-style underwater platform (anchorage support) that will be anchored or deposited on any uneven seabed to which the ADCP and turbidity sensor will be fastened;
- An interface box that will be used to power the ADCP and turbidity sensor and transfer data between the oceanographic station and the computer station;
- Four subsea cables to power the ADCP and turbidity sensor and transfer data;
- A jumper cable to test and program the ADCP out of water;
- Eight subsea connectors to link the cables and instruments (ADCP, turbidity sensor and interface box) together;
- Three tension reduction strands to relieve tension on connectors;
- Software to analyze and record data collected by the ADCP and turbidity sensor.

MANDATORY TECHNICAL SPECIFICATIONS

The oceanographic station must meet all the mandatory technical specifications described below:

1. **Acoustic Doppler Current Profiler (ADCP) - wave measuring device:**

- 1.1 Frequency of 600 kHz;
- 1.2 Real-time operational mode;
- 1.3 Ability to measure the spectra of directional waves;
- 1.4 Ability to measure to a maximum depth of 25 m the height, the non-directional spectrum of waves with periods of 2 seconds or longer;
- 1.5 Ability to measure to a maximum depth of 25 m the height, the direction and the directional spectrum of waves with periods of 4 seconds or longer;
- 1.6 Ability to measure direction and speed of ocean currents by segmenting the water column into 1 m strata to a maximum depth of 25 m;
- 1.7 Ability to measure the temperature of water surrounding the ADCP;
- 1.8 Ability to measure the pressure of the water column;
- 1.9 Must be connected to the turbidity sensor; provide electrical current to the turbidity sensor and; record and transmit readings to a computer through the interface box from the turbidity sensor (analog signal);
- 1.10 Internal memory (continuous loop recording, to be used as backup) of at least 100 MB;
- 1.11 Must include an additional 10 to 12 m of cable (different from the underwater cable used to transmit real-time data) to test and program the ADCP out of water. That additional cable is not represented on the plan of the oceanographic station in Annex C.

2. **Transmissometer-type turbidity sensor:**

- 2.1 650-660 nm wavelength;
- 2.2 Spectrum pathlength between 10 and 15 cm;
- 2.3 Must draw its electrical supply from the ADCP;
- 2.4 The data must be recorded and processed by the ADCP and then retransmitted to a computer through the interface box;
- 2.5 Must include anti-fouling system rings to prevent or reduce the growth of micro-organisms on the turbidity sensor.

3. **Tripod-style underwater platform (anchorage support):**

- 3.1 Must be resistant to the marine environment;
- 3.2 Must be comprised of three distinct, equidistant feet, designed to allow for the attachment of weights to foot extremities to provide the platform with ballast;
- 3.3 Must be no heavier than 90 kg and equipped with the eyelets for raise and file the

underwater platform;

3.4 Provide a counter-weighted gimbal mount for the ADCP to ensure the vertical alignment of the ADCP (should the station be installed on an uneven seabed);

3.5 Must have an attachment system for the turbidity sensor.

4. **Interface box:**

4.1 Must be powered with 115 v AC;

4.2 Supply power to the ADCP and turbidity sensor;

4.3 Control ADCP parameters and transfer ADCP data to the computer via RS422 communication protocol;

4.4 Must enable the connection of a computer to the interface box via a USB connection or RS232 or RS422.

5. **Subsea cables and connectors:**

See the oceanographic station plan in Annex C for reference with regards to cables A, B, C and D.

5.1 Provide one cable A of 1.5 to 2 m in length, to supply power and transfer data between the turbidity sensor and the ADCP. The cable must withstand a marine environment and abrasion. The ends of this cable must come equipped with subsea connectors to connect to each of ADCP and turbidity sensor. Both connectors must withstand a marine environment and abrasion;

5.2 Provide one cable B of 2 to 3 m in length, to supply power, transfer data and link the ADCP to the first section of cable C. The cable must withstand a marine environment and abrasion. The ends of this cable must come equipped with subsea connectors to connect to each of ADCP and the first section of cable C. Both connectors must withstand a marine environment and abrasion;

5.3 Provide one cable C of 100 to 125 m in length, to supply power and control the turbidity sensor and the ADCP and; transfer data between the turbidity sensor and ADCP. Cable C must connect the last section of cable B to the last section of cable D. The cable must withstand a marine environment and abrasion. The ends of this cable must come equipped with subsea connectors. Both connectors must withstand a marine environment and abrasion. The connectors must allow a diver to attach or disconnect the two sections of cables C and D;

5.4 Provide one cable D of 100 to 125 m in length, to supply power and control turbidity sensor and ADCP and; transfer data between the turbidity sensor and ADCP. Cable D must connect the last section of cable C to the interface box. The cable must withstand a marine environment and abrasion. The ends of this cable must come equipped with subsea connectors. Both connectors must withstand a marine environment and abrasion. The connectors must allow a diver to attach or disconnect the two sections of cables C and D;

5.5 Provide three tension reduction strands. The first two of which must be attached to cables C and D to reduce strain on the connectors. These two tension reduction strands must be connect between cables C and D by shackle or karabiner. The third tension reduction strand must be attached to the underwater platform and connected to cable C with a

shackle or karabiner. These tension reduction strands, shackles and karabiners must withstand a marine environment and abrasion.

6. Software:

6.1 The software must analyze data produced by the ADCP:

- 6.1.1 Determine the speed and direction of ocean currents from a minimum of 25 different strata in the water column;
- 6.1.2 Determine the height and the directional and non-directional spectra of waves;
- 6.1.3 Determine the temperature of the water surrounding the ADCP;
- 6.1.4 Record data on the computer's hard drive in real time to be used by other programs in real time;
- 6.1.5 Must operate under Windows XP and Windows 7 operating systems.

6.2 The software must analyze data produced by the turbidity sensor:

- 6.2.1 Determine the water turbidity indicator;
- 6.2.2 Record data on the computer's hard drive in real time to be used by other programs in real time;
- 6.2.3 Must operate under Windows XP and Windows 7 operating systems.

7. Hardware:

Provide all required material (supports, hooks, bolts, screws or any other type of material) to assemble and attach all instruments (ADCP, counter-weighted gimbal mount system, turbidity sensor) on the underwater platform. All the material must withstand a marine environment and abrasion.

TECHNICAL SUPPORT SERVICE

The technical support service must be offered by telephone and/or the internet. Support services must be offered in French or English. The response time for service requests must be less than or equal to one working day.

DELIVERABLES

The supplier must:

- deliver an underwater oceanographic station in accordance with Annex A - Requirement;
- deliver the software in accordance with Annex A - Requirement;
- deliver a copy of an user manual in paper or electronic on compact disk.

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File No. - N° du dossier

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qcn026

CCC No./N° CCC - FMS No/ N° VME

ANNEX "B"

BASIS OF PAYMENT

To supply and deliver for Parks Canada (PC), Tadoussac, Québec, Canada, the items described herein:

Item	Description	Qty.	Firm Unit Price	Extended Price
1	Oceanographic Station in accordance with the Annex A - Requirement.	1	\$ _____	\$ _____
2	Delivery The price is DDP Incoterms 2000, including customs duty, excise taxes, and includes all shipping and delivery costs.	1	\$ _____	\$ _____
TOTAL :				\$ _____

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ANNEX "C"

UNDERWATER OCEANOGRAPHIC STATION CONCEPT

ANNEX C:

Underwater Oceanographic Station Concept

