

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
Bid Receiving Public Works & Government Services  
Canada/Réception des soumissions Travaux publics et  
Services gouvernementaux Canada  
1713 Bedford Row  
Halifax, N.S./Halifax,(N.E.)  
B3J 1T3  
Halifax  
Bid Fax: (902) 496-5016

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address**  
Raison sociale et adresse du  
fournisseur/de l'entrepreneur

**Issuing Office - Bureau de distribution**  
Real Property Contracting  
1713 Bedford Row  
P.O. Box 2247/C.P.2247  
Halifax, N.S./Halifax, (N.E.)  
B3J 3C9  
Halifax

<b>Title - Sujet</b> REMOTE OPERATED VEHICLE (ROV)	
<b>Solicitation No. - N° de l'invitation</b> K4B20-120317/A	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> K4B20-12-0317	<b>Date</b> 2013-01-31
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWA-122-4961	
<b>File No. - N° de dossier</b> PWA-2-68105 (122)	<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 2013-02-27</b>	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Chinye, Chukwudi	<b>Buyer Id - Id de l'acheteur</b> pwa122
<b>Telephone No. - N° de téléphone</b> (902) 496-5476 ( )	<b>FAX No. - N° de FAX</b> (902) 496-5016
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

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

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K4B20-12-0317

Amd. No. - N° de la modif.

001

File No. - N° du dossier

PWA-2-68105

Buyer ID - Id de l'acheteur

pwa122

CCC No./N° CCC - FMS No/ N° VME

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Amendment 001 is raised to answer the questions and incorporate the following changes:

**Question 1:** First I just want to confirm the closing date i.e. it indicates 27 Feb 2013, especially if they/you would like delivery for the 28th of March. Normally PWGSC take a week or two to decide on a winning bid, this leaves very little time to build and ship a system.

**Answer to Question 1:** Public Works and Government Services Canada will strive to ensure that bids are evaluated immediately after bid closing to provide more time for a system to be built and delivered by the successful contractor. The delivery date for this requirement has been extended (see below).

**Question 2:** On the MERX cover sheet it indicates the following, "Tendering Procedures: Generally only one firm has been invited to bid" but no name has been provided.

**Answer to Question 2:** All interested suppliers may submit a bid. "Generally only one firm has been invited to bid" was an error and this has been corrected in an amended MERX cover sheet.

**Question 3:** Final comment, on page 12 of 18 Annex "A" Requirement, this page is blank. Please confirm this is correct, as I do note that the ROV system specs are presented after the page numbering stops (page 19 & 20) in this tender.

**Answer to Question 3:** The attached PDF titled "Supply a Remote Operated Vehicle" is Annex "A" Requirement for the Request for Proposal (see attached Annex A- Requirement below).

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#### **4. Term of Contract**

Delete in its entirety

Insert as follows

##### **4.1 Delivery Date**

All the deliverables must be received on or before April 30, 2013.

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**ANNEX "A"**

**REQUIREMENT  
(Attached below)**

**Delete in its entirety  
Insert as follows**

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**ANNEX "B"**

**BASIS OF PAYMENT**

**Delete in its entirety**

**Insert as follows**

**Contract award date to April 30, 2013**

**As per Amendement 001**

Column A Description of Work	Column B Unit of measurement	Column C
Supply and Delivery of one (1) remote operated vehicle in accordance with Annex A-Statement of Requirement	Firm Price	\$ _____
Total Amount		\$ _____

**Total Amount=\$ \_\_\_\_\_**

**The Total amount, will be the amount that will be considered during evaluation of all bids tendered.**

**All Other Terms and Conditions Remain the Same.**

## Supply a Remote Operated Vehicle

### *Compliance Inspections*

The ROV could be used to conduct compliance inspections in marine environments that would be otherwise inaccessible:

#### *Aquaculture*

The growth of the aquaculture industry on that Atlantic coast has led to an increase in the number of *Fisheries Act* inspections conducted by officers. A portable ROV with the capability to carefully navigate the benthic environment underneath aquaculture pens would be a valuable asset in determining the impact this fishery is having on the environment.

#### *Disposal at Sea*

The *Disposal at Sea* regulations are an integral part of the *Canadian Environmental Protection Act*. Although strong efforts have been made to enforce the regulations, the location of the potential offences (i.e. the seafloor) creates a barrier to subsequent enforcement actions. With the addition of an ROV, inspectors will be able to scan the seafloor for evidence of *Disposal at Sea* offences or verify reported disposal activities.

#### *Fisheries Act*

The General Prohibition of the *Fisheries Act* is an essential tool for the protection of the marine environment. Violations of the *Fisheries Act* can come from a variety of different sources and manifest themselves in many ways. A reliable and portable ROV with the ability to give real-time positioning would help inspectors locate potential sources of pollution far better than static drop camera. An ROV could navigate areas such as breakwaters and submerged pier faces, locating potential sources of pollution (i.e. unidentified pipes, leaks from submerged tanks or barrels, etc.) that would be impossible to find otherwise.

### **General**

- Depth rating: 300 Meters sea water (1,000 FSW)
- Minimum Five (5) DC thrusters (2 forward, 2 vertical and 1 lateral)
- Auto heading, depth and trim
- Video overlay
- Temperature sensor
- Maximum Weight 35 lbs. Must be fully portable so that one (1) person can set up and operate, if necessary
- Training max. Three (3) days. Training should include operation of ROV, maintenance and troubleshooting
- ROV Structural protection/carry case for vehicle transport
- Separate component carry case(s)

### **Thrusters**

- Minimum Five (5) DC thrusters (2 forward/reverse, 2 vertical and 1 lateral)
- Must maneuver and maintain position at full depth range (300 meters sea water) at max operating current for this model is 2 knots
- Auto depth control; must maintain a constant distance (e.g. 1 meter) from seabed without disturbing the benthic community
- Must be capable of landing on seabed
- Forward Thrust minimum: 7 kg f

- Vertical Thrust minimum: 7.5 kg f
- Lateral Thrust minimum: 3 kg f
- Operating speed at surface: 2.8 knots/ 1.44 m/s
- Operating Current: 2 knots/ 1.02 m/s

### **Cameras/ Lighting**

Camera Tilt	180 degrees - internal chassis rotates
Range of View	270 degrees - 180 degrees from tilt, 90 degrees from camera lens
Camera – Primary	680 resolution Wide Dynamic Range color 0.1 Lux or less
Focus	Manual focus control via operator control unit. 90mm to infinity
Video Format	NTSC
Output Signal	Composite
Internal Lighting	700 Lumen LED array. Variable intensity via operator control unit.

### **Integrated Navigation Console including**

- Complete piloting, navigation, video recording and control system
- Minimum Intel Windows XP 7 computer, (min250GB) and waterproof keyboard
- Minimum 51cm (20") Direct Sunlight Viewable Monitor
- Integrated Operator Control Unit and Surface Power Supply
- Integrated Navigation & Sonar firmware and software
- Shockproof and water resistant case with wheels and handle

### **Tether**

#### **Tether & Reel**

Diameter	8 mm - 0.3 in nominal
Length	150 meters - 500 feet
Working Strength	100 kg f - 220 pd f
Breaking Strength	700 kg f - 1,543 pd f
Strength Member	Kevlar
Buoyancy	Neutral in fresh water - slightly positive in Seawater
Conductors	Twisted pair with shield
Reel construction	Heavy duty marine grade materials (stainless steel, Starboard PE)
Reel Capacity	350 meters - 1,150 feet

### **ROV Capabilities**

Real time GPS positioning and capable of mapping software integration/overlay and video tracking data recording. System must be supplied with a tracking system

System must be sonar ready

### **Warranty**

Minimum two year limited warranty