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**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**

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<b>Title - Sujet</b> Alkalinity System	
<b>Solicitation No. - N° de l'invitation</b> 23240-160749/A	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> 23240-160749	<b>Date</b> 2015-11-30
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$PV-915-68285	
<b>File No. - N° de dossier</b> pv915.23240-160749	<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 2015-12-16</b>	
<b>Time Zone</b> Fuseau horaire Eastern Standard Time EST	
<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> Gosselin, Monique	<b>Buyer Id - Id de l'acheteur</b> pv915
<b>Telephone No. - N° de téléphone</b> (819) 956-3803 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> Natural Resources Canada 601 Booth Street Ottawa, Ontario K1A 0E8	

**Instructions: See Herein**

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<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>

This amendment is raised to publish all questions and answers received on 11th November 2015.

## QUESTIONS AND ANSWERS

**Q.1** Point 1.7 would 115 positions on the sample changer be sufficient?

A.1 No. NRCAN will not go for less than 200 because that would require too much analyst time (ie could not really do the analysis as a large batch), which is highly inefficient.

**Q.2** **Point 1.10 would it be possible to have more information on the meaning of this statement. What would control the determination of the dilution factor? How would the system know when to dilute**

A.2 Clarification: if the alkalinity is above the maximum calibrated concentration, then the system should drain, rinse and take a second smaller aliquot that is then automatically diluted prior to the titration step within the protocol. High alkalinity level and dilution level should be user defined.

**Q.3** **Point 2.2 would 9 buffer be sufficient?**

A.3 No. Currently the standard operating procedure (SOP) requires 12 calibration standards for a typical range of samples (for both alkalinity and pH buffer). The 4 remaining calibration standards (for a total of 16) are required because some samples require further refinement of the SOP calibration, or if the sample falls out of our typical calibration range.

**Q.4** **Point 1.1**  
**The system must be using 15 ml sample aliquots.**  
**Our system use 50 ml tubes but the sample volume that can be used is 15, 20 and 25 ml .**  
**On each rack you can choose the sample volume that you wish to analyze and it gets adjusted automatically. This will give better flexibility dealing with different sample concentrations. Would this be acceptable?**

A.4 15mL is the maximum volume acceptable. As for the size of the tube, 15 mL aliquots in 50 mL tubes would be generating a lot of waste and would require more storage and bench space (there is limited storing space in our laboratory). It would also be more expensive in terms of consumables (ie inefficient in terms of cost).

**Q.5** **Point 1.7**  
**Minimum 200 samples required.**  
**Would 180 samples be acceptable?**

A.5 No. I currently have 220 positions and that works well – I will not go for less than 200 because that would require too much analyst time (ie it would compromise my ability to do analyses in large batches), which is highly inefficient.

**Q.6** **Point 1.8**  
**Space constrains 18”X24”**  
**Would a dimension of 30”X38” be acceptable if we provide a mobile bench so no bench space is used?**

A.6 No. Lab space is limited and the system needs to fit a dedicated location on the lab bench.

**Q.7 Point 1.11**

**The system must determine the optimum rinse protocol**

**The requested system will pump the sample into titration vessel which make it suffer from cross contamination between samples that is why optimization of rinse is critical. We titrate direct into the sample tube after adjusting the sample volume to desired volume automatically to prevent cross contamination . Would this be acceptable?**

A.7 No, titrating directly in the tube would not leave any unaltered sample for further dilution or testing. Sample volume is a critical aspect of our analyses and every mL counts – by not leaving any unaltered sample the system is: 1) not providing a failsafe method to generate a second analysis should the initial reading be out of range; 2) not leaving any residual unused sample volume that could be deployed for other analyses. Cross-contamination can be eliminated with appropriate rinse/cleaning protocols (which is one of the listed system specifications).