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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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86 Clarence Street, 2nd floor  
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K7L 1X3

<b>Title - Sujet</b> Karl Fischer Titrator	
<b>Solicitation No. - N° de l'invitation</b> H4004-182962/A	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> H4004-18-2962	<b>Date</b> 2018-12-07
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$KIN-630-7628	
<b>File No. - N° de dossier</b> KIN-8-50127 (630)	<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 2019-01-04</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 type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Holt, Judy	<b>Buyer Id - Id de l'acheteur</b> kin630
<b>Telephone No. - N° de téléphone</b> (613) 536-4995 ( )	<b>FAX No. - N° de FAX</b> (613) 545-8067
<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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*This amendment is issued to Solicitation Number H4004-182962/A to answer the following questions and make amendments to Annex D, Mandatory Technical Requirements and Annex A, Requirement:*

**A. Questions from Industry and answers from Canada:**

**Question 1** - Re: Hardware Specification 3.2.2: Are you open to two separate titrators (one for volumetric, one for coulometric)?

**Response** - We are open to two separate titrators, but only if they are both operated from one computer. The instrument will be installed in a containment laboratory with severe space limitations that would preclude us from installing two instruments operated by separate computers.

**Question 2** - Re: Hardware Specification 3.2.5: What is the purpose of the 2 mL and 50 mL burette sizes? Typical Karl Fischer titrations are performed with 5 mL burettes for optimum accuracy and speed. A 50 mL burette lacks the precision needed for accurate determinations, and a 2 mL burette is generally very slow.

**Response** - As a regulatory laboratory, we are required to comply with international quality guidelines that require us to adjust the concentration of titrant to ensure that between 20% and 90% of the burette volume is used to complete the titration. We need access to a wide range of burette volumes to ensure that this is possible in every case. For example, when a sample has low water content, but is not suitable for coulometric analysis due to its nature, it is necessary to use a 2 mL burette with Hydranal 1 or Hydranal 2 titrant.

**Question 3** - Re: Hardware Specification 3.2.8: There is no evidence to show that an overhead burette drive with top-down dosing, rather than bottom-up dosing, has any benefits. Please explain this requirement/advise if bottom-up dosing is sufficient.

**Response** - We agree that either top-down or bottom-up dosing is acceptable.

**Question 4** - Re: Hardware Specification 3.2.11: Many current technologies rely on RFID communication. While hardwired connections often require interfaces and can fail, RFID has proven a reliable and standard technology across many industries. Please explain this requirement.

**Response** - We do not have experience with instruments that use RFID communication, so we will have to accept the vendor's statement.

**Question 5** - Re: Software Specification 3.2.18: Please advise if PDF, CSV, and XML are acceptable formats.

**Response** - This actually refers to Software Specification 3.2.15. PDF and CSV are sufficient.

**B. Amendments to Annex D, Mandatory Technical Criteria and Annex A Requirement:**

**B1. Reference: Annex D, Mandatory Technical Criteria and Annex A Requirement, Hardware Requirements 3.2.2**

**Delete:** In its entirety

**Insert:** 3.2.2 Must be able to perform two separate analyses such as KFC and KfV titration simultaneously. If the system includes two separate titrators for KFC and KfV, they must both be controlled by a single computer

**B2. Reference: Annex D, Mandatory Technical Criteria and Annex A Requirement, Hardware Requirements 3.2.8**

**Delete:** In its entirety

**Insert:** 3.2.8 Reagent dosing technology must have zero dead volume for automated reagent exchange, cleaning and preparing.

**B3. Reference: Annex D, Mandatory Technical Criteria and Annex A Requirement, Hardware Requirements 3.2.11**

**Delete:** In its entirety

**B4. Reference: Annex D, Mandatory Technical Criteria and Annex A Requirement, Software Requirements 3.2.15**

**Delete:** In its entirety

**Insert:** Titration control software must be able to export data files in multiple common machine readable formats including PDF and CSV.