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NA
Alberta

**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

Public Works and Government Services Canada/Travaux
publics et Services gouvernementaux Canada
Harry Hays Building (HHB)
Room 759, 220-4th Avenue SE
Calgary
Alberta
T2G 4X3

Title - Sujet Chemical Analysis Instrument	
Solicitation No. - N° de l'invitation W7714-207325/A	Amendment No. - N° modif. 004
Client Reference No. - N° de référence du client W7714-207325	Date 2020-08-17
GETS Reference No. - N° de référence de SEAG PW-\$CAL-136-7078	
File No. - N° de dossier CAL-9-42119 (136)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2020-09-01	Time Zone Fuseau horaire Mountain Daylight Saving Time MDT
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: Hemy, Andrew	Buyer Id - Id de l'acheteur cal136
Telephone No. - N° de téléphone (403) 463-6589 ()	FAX No. - N° de FAX (780) 497-3510
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Defence R&D Canada Suffield Bldg 560 Receiving 560 Mount Sorrell Road Ralston AB T0J 2N0 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	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

This amendment No. 004 is being raised to answer the questions below and make the following changes to the solicitation document:

Questions:

Q1. Is the sampling conducted on online streams?

A1. Yes the sampling is to be conducted online/inline with the air streams.

Q2. We are able to perform this type of sampling from 4 streams with a custom valve interface, it would be sequential or selective, not simultaneous. Is that ok?

A2. No. We require minimal sampling interruption as we require a cumulative/total analyte amount over time as well as near real time analysis of analyte changes over time, for all 4 streams (changes may be happening to different streams at the same time). This would not be possible with sequential sampling and analysis.

Q3. We are unfamiliar with a system that would be able to run 3 gas streams and a liquid injection at the same time. Simultaneous injection would require that the oven run isothermal or that the liquid and the gas use the same GC method. Is there a specific sequence or method in mind for the sampling phase? If so would you please provide it?

A3. It would be acceptable to run isothermal or using the same GC method.

Q4. Does item 4 and 5 specify a Thermal desorption system? And if so, is it separate from the sampling step or they can be conducted together?

A4. There needs to be a sampling step, then a desorption step. If the question being asked is if one unit can handle both these steps then yes this is acceptable.

Q5. Does the required instrument need to have 4 different GC system, or you are planning to run the samples sequentially? If it is sequential please response to question 6.

A5. The system needs to be able to run simultaneously 4 separate GC analysis.

Q6. We could propose a system which could sample from up to 4 streams that would analyze sequentially, using a custom valving system to select between streams. The system would have one split/splitless inlet and one PFPD dedicated to use for the gas streams and one split/splitless inlet for liquid sample from the autosampler. Is this system something you are looking for?

A6. No.

Q7. Does the end user require specific dimensions for the DB5 columns requested in "item 12" of Annex A?

A7. We need the equivalent to the 30m x 0.530mm columns being used.

Q8. Is the end user looking at trading-in an existing instrument (on-site destruction is acceptable for a trade-in)?

A8. No.

Q9. Item #1 and #2 suggest that you meant tube sampling for both liquid and gas (air) sampling in item tube. This is not a challenge, however, we wanted to be clear as possible to recommend the best configuration for your requirements. Do you intend to do a recollection on the tubes for repeat analysis?

A9. Yes we intend for repeat analysis using the same collection tubes.

Q10. In item #2, what was this symbol (from 0.1 to 10L)? Is it µL (micro liters)?

A10. Yes it is micro litres.

Q11. Our cold trap does not require cryo cooling. It has a Peltier device which cools the trap to the required temperatures. Would Canada accept this option?

A11: Yes this is an acceptable option.

Q12. Item #7: Is Canada open to another detector beside the FPD? An MS detector will provide enhanced DLs so you would not need to take as much sample volume. Moreover, MS detector gives you the ability to detect other analytes that an FPD can't in case you need them in the future. When dealing with unknown compounds, such as precursors of your targeted compounds or their degradation products, MS gives identity information on unknowns, given the mass spectra database that's available for MS. An MS detector would be at least 100 times more sensitive than an FPD, allowing you enhanced detection levels and requiring less sample volume. If MS option is acceptable, we will recommend both EI and CI ionization techniques. Organophosphorus agents barely provide molecular ion information under EI-MS mode. The CI source can be a complementary ionization technique to enable the accurate determination of organophosphorus agents as well as the identification of novel chemicals or related impurities.

A12. Yes we are open to a MS detector.

Q13. Item #12: In our experience, DB5 for your application is not the best column for sulfur analysis. Would you be open to a better column?

A13. Yes we would be open to better options.

Changes:

1) On page 14 of 20, Compliance Matrix:

Delete:

2	Instrument must be able to simultaneously inject a liquid (from 0.1 to 10 µL) sample while injecting from at least 3 individual gas flows (from 50 to 250mL/min).
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Insert:

2	Instrument must be able to simultaneously inject a liquid (from 0.1 to 10 micro litres) sample while injecting from at least 3 individual gas flows (from 50 to 250mL/min).
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2) On page 15 of 20, Compliance Matrix:

Delete:

7	Must include a separate pulsed flame photometric detector for each of the gas flows capable of detecting 1 picogram per second of sulphur containing compounds and 100 femtogram per second of phosphorous containing compounds.
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Insert:

7	Must include a separate detector for each of the gas flows with performance equivalent or superior to a pulsed flame photometric detector's linear range and limit of detection. Capable of a limit of detection of 1 picogram per second of sulphur containing compounds with at least 2 orders of magnitude linear range; and 100 femtogram per second of phosphorous containing compounds with a at least 3 order of magnitude linear range.
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Delete:

12	Must include Gas Capillary Columns-with DB5 separation material for each gas flow and appropriate gas filters and tubing to attach to standard gas cylinders.
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Insert:

12	Must include Gas Capillary Columns with equivalent or superior separation efficiency to a 30m x 0.530mm DB5 column for organo-phosphorus and sulphur compounds for each gas flow and appropriate gas filters and tubing to attach to standard gas cylinders.
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ALL OTHER TERMS AND CONDITONS REMAIN THE SAME