



<p>RETURN BIDS TO/RETOURNER LES SOUMISSIONS À:</p> <p>Bid Receiving - Environment Canada / Réception des soumissions – Environnement Canada</p> <p>Electronic Copy: ec.soumissions-bids.ec@canada.ca</p> <p>BID SOLICITATION AMENDMENT MODIFICATION DE LA DEMANDE DE SOUMISSIONS</p> <p>The referenced Bid Solicitation is revised in this document; unless otherwise indicated, all other terms and conditions of the Bid Solicitation remain the same.</p> <p>La demande de soumissions citée en référence est modifiée dans ce document; sauf indication contraire, les modalités de la demande de soumissions demeurent les mêmes.</p>	<p>Title – Titre Landfill Leachate Sampling of Contaminants of Concern to Whales in Canada</p>	
	<p>EC Bid Solicitation No. /SAP No. – N° de la demande de soumissions EC / N° SAP 5000055394/B</p>	<p>Amendment No. - N° de modification 002</p>
	<p>Amendment Date (YYYY-MM-DD) – Date de la modification (AAAA-MM-JJ) 2021-09-02</p>	
	<p>Bid Solicitation Closes (YEAR-MM-DD) - La demande de soumissions prend fin (AAAA-MM-JJ) at – à 2:00 P.M. on – le 2021-09-09</p>	<p>Time Zone – Fuseau horaire Eastern Daylight Time (EDT)</p>
	<p>F.O.B – F.A.B See herein</p>	
	<p>Address Enquiries to - Adresser toutes questions à Garvin.Suepaul@ec.gc.ca</p>	
	<p>Telephone No. – No de téléphone 613-295-4823</p>	<p>Fax No. – No de Fax N/A</p>
	<p>Delivery Required (YEAR-MM-DD) – Livraison exigée (AAAA-MM-JJ) See herein</p>	
	<p>Destination of Services / Destination des services See herein</p>	
	<p>Security / Sécurité See herein</p>	
	<p>Vendor/Firm Name and Address - Raison sociale et adresse du fournisseur/de l'entrepreneur</p>	
	<p>Telephone No. – N° de téléphone</p>	<p>Fax No. – N° de télécopieur</p>
	<p>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)</p>	
<p>_____</p> <p>Signature</p>	<p>_____</p> <p>Date</p>	



AMENDMENT No. 002

Amendment 002 of Solicitation # **5000055394/B** is raised to revise the Request for Proposal (RFP) and answer questions from suppliers.

RFP REVISIONS

The RFP revisions include extending the bid solicitation period.

1. At page 1 of the RFP, Bid Solicitation Closes (YEAR-MM-DD):

DELETE: 2021-09-07

INSERT: 2021-09-09

QUESTIONS (Q) AND ANSWERS (A)

The following questions are regarding the requested analytical parameters and specifications noted in the RFP from Table 2 and Appendix 1 to Annex A. The RFP often asks for subsets of compounds normally measured by ECCC or in current SRKW studies.

- Q3. For the analytical category DDT, the CAS numbers refer to 2,4 and 4,4 DDT, from the class of analytes Organochlorine (OC) pesticides normally measured by EPA 1699. DDT compounds (normally 6 DD compounds including degradation / metabolite forms) are usually measured as wider suite of OC compounds that includes a number of other Stockholm POPs such as chlordanes, endosulfans, dieldrin, aldrin, technical toxaphene etc.. Please confirm the full OC pesticide target lists and the degree of speciation expected.
- A3. All DDT metabolites should be included if feasible. If included, please provide the cost of the analysis in the financial bid.
- Q4. For the analytical category PCBs, the most complete and sensitive method is measuring all 209 PCB (some as co-elutions as per method 1668A/C). Homologue values are the sum of the congener values as per EPA 1668. Please confirm the preferred completeness in terms of congeners for the PCB analysis.
- A4. All possible speciated analyses should be provided for complex mixtures if feasible. Therefore, congener values should be reported in addition to homologue values. All results obtained from laboratories should be made available for all congeners in a readable format (e.g. Excel spreadsheet); however only the substances and/or main homologue group totals are to be interpreted in the report.
- Q5. Are tetra-octa homologue totals for non-TEQ assigned Dioxins and Furans, as per EPA 1613B required, in addition to the 17 TEQ assigned Dioxins and Furans?
- A5. For consistency in reporting, it would be preferable if the following compounds are included in the analysis/report:

DIOXINS

1234678-HpCDD
123478-HxCDD
123678-HxCDD
123789-HxCDD
12378-PeCDD
2378-TCDD



Octachlorodibenzodioxin
Total Hepta-Dioxins
Total Hexa-Dioxins
Total Penta-Dioxins
Total Tetra-Dioxins
Total HpCDD # Homologues
Total HxCDD # Homologues
Total PeCDD # Homologues
Total TCDD # Homologues

FURANS

1234678-HpCDF
1234789-HpCDF
123478-HxCDF
123678-HxCDF
123789-HxCDF
12378-PeCDF
234678-HxCDF
23478-PeCDF
2378-TCDF
Octachlorodibenzofuran
Total Hepta-Furans
Total Hexa-Furans
Total Penta-Furans
Total Tetra-Furans
Total PCDD/PCDF INT-TEQ (ND=0)
Dioxins and Furans (TEQ)
Total PCDD/PCDF INT-TEQ (ND=DL)
Total HxCDF # Homologues
Total HpCDF # Homologues
Total PeCDF # Homologues
Total TCDF # Homologues

- Q6. The PFAS or PFC compounds requested are a smaller list than normally measured. Most current lists of PFAS include precursor to perfluorinated carboxylates and sulfonates plus newer replacement products of manufacturing intermediates. There is a new method for PFAS for non-potable water, solids and tissue expected from the U.S. EPA specifying 40 compounds – link attached [CWA Analytical Methods for Per- and Polyfluorinated Alkyl Substances \(PFAS\) | Clean Water Act Analytical Methods | US EPA](#). Compounds are reported in their acid form, though the anions are the compounds measured. Key compounds for landfill leachates are included (FOSAs and FOSEs) and FTCAs (3:3, 5:3, 7:3) which are usually the most dominant compounds in landfill leachates (and precursors to the current targets). The salts of PFOS are not measured by LC MS/MS as the salt is dissociated. Please confirm the required and desired PFC compounds for measurement.
- A6. At minimum, the bid must include the PFAS and PFC compounds listed in Appendix 1 to Annex A (List of Substances and CAS Numbers) of the RFP; and the samples must be analyzed by an accredited laboratory that is a member of the International Laboratory Accreditation Cooperation. Methods must be documented through industry or government certification (e.g. Environmental Protection Agency) and/or peer reviewed publications. If the Bidder proposes changes to any elements of the SOW, it should be clearly indicated in the proposal and financial bid, and the rationale should be provided accordingly.

To provide consistency in reporting, it would be preferable if the analysis included the following compounds:



PERFLUORINATED COMPOUNDS (PFCs)

10:2 Fluorotelomer sulfonic acid(10:2 F)
4:2 Fluorotelomer sulfonic acid(4:2 FTS)
6:2 Fluorotelomer sulfonic acid(6:2 FTS)
8:2 Fluorotelomer sulfonic acid(8:2 FTS)
N-Et PFO sulfonamide (EtFOSA)
N-Et PFO sulfonamidoacetic acid(EtFOSAA)
N-Et PFO sulfonamidoethanol (EtFOSE)
N-Me PFO sulfonamide (MeFOSA)
N-Me PFO sulfonamidoacetic acid(MeFOSAA)
N-Me PFO sulfonamidoethanol (MeFOSE)
Perfluorobutane Sulfonate [PFBS]
Perfluorobutanoic acid (PFBA)
PERFLUORODECANE SULFONATE (PFDS) Perfluoroheptane sulfonate (PFHpS)
Perfluoroheptanoic acid (PFHpA)
Perfluoropentane sulfonic acid (PFPeS)
Perfluorotetradecanoic Acid
Perfluorotridecanoic Acid (PFTrDA)
Perfluoroundecanoic acid (PFUnDA)
PFDA
PFDoA
PFHxA
PFHxS
PFNA
PFOA
PFOS
PFOSA
PFPeA
ADONA
F53B major
F53B minor

Q7. PBDEs and PCNs analytical methods measure congeners of the respective classes. The PBDE CAS numbers (reflecting homologue groups) are reported by the addition of congeners within a homologue group and the addition of all congeners reported. Please confirm for these analyte classes that congener methods are required and that congeners are to be reported.

Not all 209 PBDE congeners may be measured qualitatively due to an absence of standards for some congeners. Is the EPA method 1614A applicable as the minimum guidance for PBDE congeners to be measured and included in the homologue groups? PCNs (75 congeners possible) do not have a reference method. Is there any guidance on the number of congeners required?

A7. As indicated above, all possible speciated analyses should be provided for complex mixtures if feasible. All results obtained from the laboratory analysis should be made available for all congeners in a readable format (e.g. Excel spreadsheet); however only the substances and/or main homologue group totals (e.g. Tetra, Penta, Hexa, Deca-BDEs, etc.) are to be interpreted in the report.

The EPA method 1614A is suitable for the analysis of PBDE congeners to be measured and included in the homologue groups.



Based on previous experience, it is anticipated that at least 50 PCN congeners can be measured.

- Q8. For the analyte classes PCTs and PBBs, there is a limited number of standards market to provide a limited degree of measurement. What is the desired degree of completeness in this category and is there any desired analytical methodology?
- A8. ECCC is aware that standards are available for the parameters listed below. This is not necessarily an exhaustive list. It is the responsibility of the Bidder to provide the analytical methods that will be used to analyze the samples. These methods must be documented through industry or government certification (e.g. Environmental Protection Agency) and/or peer reviewed publications.

POLYCHLORINATED TERPHENYLS (PCTs)

Aroclor 5432
Aroclor 5442
Aroclor 5460

POLYBROMINATED BIPHENYLS (PBBs)

PBB-52
PBB-101
PBB-153
PBB-180
PBB-194
PBB-206
PBB-209

- Q9. The PPCP lists supplied represent 2 of 5 lists included in EPA 1694, all of which have been used in the ECCC CMP program. The list 4 description is for acidic extraction whereas the root method specifies basic extraction for these compounds. Please confirm this should be basic extraction.
- A9. USEPA Method 1694: Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS was published in 2007. Progress has been made since then and analyses are now available for substances not originally included in that method. The USEPA website also states that the information in 1694 or similar LC/MS/MS methods may be used as a starting point to develop an analytical method tailored to specific matrices or compounds, and that modifications that improve the accuracy and precision associated with individual subsets of compounds or individual matrices are encouraged.

The methods identified in the RFP were obtained from laboratories currently providing these analyses. We recognize that different laboratories offer analyses for varying suites of PPCPs and are open to alternate lists of PPCPs that includes some of the listed substances and others not listed in the RFP. Any changes to the list of PPCPs and / or the methodology should be clearly documented in the bid along with the rationale.

- Q10. For the compound BPA, there are a number of replacement BP compounds (BPA analogues) such as B, AF, E, S,F etc.) entering the consumer market over the past 6 years. These are included in accredited methods that also measure BPA. Is it desirable to measure BP compounds other than BPA?



- A10. ECCC requires BPA to be reported, however if BPA analogues are included in the same suite of substances, all results obtained from laboratories analysis should be made available, i.e.: tabulated in a readable and usable format such as an Excel spreadsheet.
- Q11. For the analyte class Dechlorane Plus, this is normally measured with other Br/Cl flame retardants of interest in the CMP and SRKW programs and the compound is but 1 of interest in this class. Other dechlorane compounds include mirex, anti and syn dechlorane, and Dec 602,603, 604. Other Br and Cl flame retardants are also run in both CMP and SRKW programs. Should other Br and Cl flame retardants normally included in CMP and SRKW programs be run with Dechlorane method if they are in the same analytical method.
- A11. ECCC requires Dechlorane Plus to be reported, however if the other Br/Cl flame retardants are part of the same suite of substances, all results obtained from laboratories analysis should be made available, i.e.: tabulated in a readable and usable format such as an Excel spreadsheet.

All other terms and conditions of the Bid Solicitation remain the same.