



<p>RETURN BIDS TO: RETOURNER LES SOUMISSIONS À:</p> <p>Bid Receiving - Environment Canada / Réception des soumissions – Environnement Canada</p> <p>Electronic Copy : / Copier électronique : soumissionsbids@ec.gc.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 Sediment Chemical Analysis and Toxicity Testing</p>	
	<p>EC Bid Solicitation No./SAP PR No. - N° de la demande de soumissions EC / N° SAP PR 5000072105R</p>	<p>Amendment No. - N° de modif. 02</p>
	<p>Date of Bid Solicitation (YYYY-MM-DD) – Date de la demande de soumissions (AAAA-MM-JJ) 2023-08-01</p>	
	<p>Bid Solicitation Closes (YEAR- MM-DD) - La demande de soumissions prend fin (AAAA- MM-JJ) at – à 3 :00 p.m. on – le 2023-08-28</p>	<p>Time Zone – Fuseau horaire Pacific Daylight Time</p>
	<p>F.O.B – F.A.B</p>	
	<p>Address Enquiries to - Adresser toutes questions à Heidi Noble Heidi.Noble@ec.gc.ca</p>	
	<p>Telephone No. – No de téléphone</p>	<p>Fax No. – No de Fax</p>
	<p>Delivery Required (YEAR-MM-DD) – Livraison exigée (AAAA- MM-JJ) 2024-03-31</p>	
	<p>Destination of Services / Destination des services British Columbia</p>	
	<p>Security / Sécurité There is no security requirement applicable to the requirement</p>	



The amendment to the bid solicitation is to address the enquiries received:

Response(s) (R) to Question(s) (Q)1:

Q3. Under the particle size analyte, there has been two method mentioned: sieve and pipette / laser diffraction and ASTM D422-63. These are two very distinct method for particle size analysis. However, we only have one line item in the price table for particle size analysis. I'd like to confirm with the technical team which approach the ECCC prefers for particle size analysis.

R3. ASTM D422-63 is no longer a required method for this Work and therefore has been removed from the solicitation in its entirety. The price per sample for particle size should reflect the sieve and pipette / laser diffraction method.

Q4. Can ECCC confirm the detection limits required for dioxins and furan analysis by EPA 1613B? Table A3 details a requirement of <= 0.1 pg/g for specific dioxin analytes. However, the subsequent Excel attachment suggest that a <= 0.5 pg/g detection limit is acceptable.

R4. The detection limit requirement for dioxins and furan analysis by EPA 1613B is <= 0.5 pg/g.

Questions 1 and 2 have been addressed under Amendment 1.

The bid solicitation is amended as follows:

ATTACHMENT 1 TO PART 4

MANDATORY TECHNICAL CRITERIA

Point-Rated Technical Criteria

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No.	Point-Rated Technical Requirements	Maximum Points	Bidder indicates the proposal cross-reference page(s)	For ECCC Use Only: Does the Bidder meet mandatory item? (Yes / No)
R1	<p>The Bidder and/or its proposed subcontractors with ISO 17025 laboratory accreditation from CALA, SSC or A2LA should demonstrate experience analyzing marine sediment samples for each class of parameters listed below between January 1, 2022 and December 31, 2022 by completing the Attachment 5 to Part 4: Bidder Experience Table or providing the equivalent information and submitting it with the bid.</p> <ol style="list-style-type: none"> Particle size by sieve and pipette / laser diffraction with a required reporting of % gravel (16 mm – 2 mm), % sand (2mm – 0.0625 mm), % silt (0.0625 mm – 0.0039 mm), and % clay (<0.0039 mm) Metals using digestion method EPA 3050B and analytical method EPA 6020A or 6020B 	25 points		



	<ul style="list-style-type: none"> 3) PAH by GC/MS, analytical method EPA 8270D or EPA 8270E 4) PCB by analytical method EPA 1668C 5) Dioxins and furans by analytical method EPA 1613 or EPA 1613B <p>Bidders who have analyzed 50 marine sediment samples or more for each parameter will receive 5 points per parameter, up to a maximum of 25 points.</p>			
<p>R2</p>	<p>The Bidder and/or its proposed subcontractors with ISO 17025 laboratory accreditation from CALA, SSC or A2LA should demonstrate experience meeting the minimum detection limits as shown in Tables A1 to A3 in the Statement of Work for each class of parameters listed below between January 1, 2022 and December 31, 2022 by completing the Attachment 5 to Part 4: Bidder Experience Table or providing the equivalent information and submitting it with the bid.</p> <ul style="list-style-type: none"> 1) Particle size by sieve and pipette / laser diffraction with a required reporting of % gravel (16 mm – 2 mm), % sand (2mm – 0.0625 mm), % silt (0.0625 mm – 0.0039 mm), and % clay (<0.0039 mm) 2) Metals using digestion method EPA 3050B and analytical method EPA 6020A or 6020B 3) PAH by GC/MS, analytical method EPA 8270D or EPA 8270E 4) PCB by analytical method EPA 1668C 5) Dioxins and furans by analytical method EPA 1613 or EPA 1613B <p>Bidders who have met minimum detection limits at or below values as shown in Tables A1 to A3 in the Statement of Work will receive 5 points per parameter, up to a maximum of 25 points.</p>	<p>25 points</p>		



ATTACHMENT 2 TO PART 4

LABORATORY APPLICATION TABLE

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Insert:

The Bidder must complete the Laboratory Application Table or provide the equivalent information and include it with its bid.

Analyte		Analytical Method	Detection Limit		Bidder indicates the detection limit and relevant unit	For ECCC Use Only: Does the Bidder meet the required detection limit? (Yes / No)
			Value	Unit		
Total Organic Carbon		EPA/600/R-02/069	≤ 0.10	%		
Moisture		ASTM D2216-19	≤ 1.00	%		
Particle Size		Sieve and pipette / laser diffraction	-	Wentworth Classification		
			≤ 1.00	% Gravel (16 mm – 2 mm) % Sand (2mm – 0.0625 mm) % Silt (0.0625 mm – 0.0039 mm) % Clay (<0.0039 mm)		
Metals	Arsenic	EPA 3050B (Digestion Method) and EPA 6020A or 6020B	≤ 1.00	mg/kg dry weight		
	Cadmium	EPA 3050B (Digestion Method) and EPA 6020A or 6020B	≤ 0.20	mg/kg dry weight		



	Chromium	EPA 3050B (Digestion Method) and EPA 6020A or 6020B	≤ 1.00	mg/kg dry weight		
	Copper	EPA 3050B (Digestion Method) and EPA 6020A or 6020B	≤ 1.00	mg/kg dry weight		
	Lead	EPA 3050B (Digestion Method) and EPA 6020A or 6020B	≤ 0.50	mg/kg dry weight		
	Mercury	EPA 3050B (Digestion Method) and EPA 7471	≤ 0.05	mg/kg dry weight		
	Zinc	EPA 3050B (Digestion Method) and EPA 6020A or 6020B	≤ 2.00	mg/kg dry weight		
PAH	Acenaphthene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
	Acenaphthylene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
	Anthracene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
	Benzo(a)anthracene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
	Benzo(a)pyrene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
	Benzo(b)fluoranthene or Benzo(b,j)fluoranthene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		



Benzo(g,h,i)perylene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Benzo(k)fluoranthene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Chrysene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Dibenz(a,h)anthracene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Fluoranthene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Fluorene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Indeno(1,2,3-cd)pyrene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Naphthalene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Phenanthrene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight		
Pyrene	Gas Chromatography/Mass Spectrometry	≤ 0.05	mg/kg dry weight		



		(GC/MS) or EPA 8270D or EPA 8270E				
	Total PAH (EPA 16)	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.20	mg/kg dry weight		
Dioxins and Furans	2,3,7,8-TCDD	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,7,8-PECDD	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,4,7,8-HxCDD	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,6,7,8-HxCDD	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,7,8,9-HxCDD	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,4,6,7,8-HPCDD	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	OCDD	EPA 1613 or EPA 1613B	≤ 1.0	pg/g dry weight		
	2,3,7,8-TCDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,7,8-PECDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	2,3,4,7,8-PECDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,4,7,8-HxCDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,6,7,8-HxCDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,7,8,9-HxCDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	2,3,4,6,7,8-HxCDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,4,6,7,8-HPCDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
	1,2,3,4,7,8,9-HPCDF	EPA 1613 or EPA 1613B	≤ 0.5	pg/g dry weight		
OCDF	EPA 1613 or EPA 1613B	≤ 1.0	pg/g dry weight			



ATTACHMENT 5 TO PART 4

BIDDER EXPERIENCE TABLE

Delete: In its entirety

Insert:

The Bidder should complete the Bidder Experience Table or provide the equivalent information and include it with its bid.

The Bidder may add additional lines for projects.

The Bidder may indicate the range if minimum detection limit varies between analytes within a class of parameter.

Project 1		
Client Name		
Description of Project		
Classes of Parameters	Number of Marine Sediment Samples Analyzed between January 1, 2022 and December 31, 2022	Minimum detection limit and units
1) Particle size by sieve and pipette / laser diffraction with a required reporting of % gravel (16 mm – 2 mm), % sand (2mm – 0.0625 mm), % silt (0.0625 mm – 0.0039 mm), and % clay (<0.0039 mm)		
2) Metals using digestion method EPA 3050B and analytical method EPA 6020A or 6020B		
3) PAH by GC/MS, analytical method EPA 8270D or EPA 8270E		
4) PCB by analytical method EPA 1668C		
5) Dioxins and furans by analytical method EPA 1613 or EPA 1613B		
Project 2		



Client Name		
Description of Project		
Classes of Parameters	Number of Marine Sediment Samples Analyzed between January 1, 2022 and December 31, 2022	Minimum detection limit and units
1) Particle size by sieve and pipette / laser diffraction with a required reporting of % gravel (16 mm – 2 mm), % sand (2mm – 0.0625 mm), % silt (0.0625 mm – 0.0039 mm), and % clay (<0.0039 mm)		
2) Metals using digestion method EPA 3050B and analytical method EPA 6020A or 6020B		
3) PAH by GC/MS, analytical method EPA 8270D or EPA 8270E		
4) PCB by analytical method EPA 1668C		
5) Dioxins and furans by analytical method EPA 1613 or EPA 1613B		



ANNEX A

STATEMENT OF WORK

Table A1: Detection limits required for physical, metal, and PAH analytical groups.

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Insert:

Analytical Group	Analyte	Analytical Method ¹	Detection Limit	
			Value	Unit
1 – Physical	Total Organic Carbon	EPA/600/R-02/069	≤ 0.10	%
	Moisture	ASTM D2216-19	≤ 1.00	%
	Particle Size	Sieve and pipette / laser diffraction	-	Wentworth Classification
			≤ 1.00	% Gravel (16 mm – 2 mm) % Sand (2mm – 0.0625 mm) % Silt (0.0625 mm – 0.0039 mm) % Clay (<0.0039 mm)
2 – Metal	Arsenic	EPA 3050B (Digestion Method) and EPA 6020B	≤ 1.00	mg/kg dry weight
	Cadmium	EPA 3050B (Digestion Method) and EPA 6020B	≤ 0.20	mg/kg dry weight
	Chromium	EPA 3050B (Digestion Method) and EPA 6020B	≤ 1.00	mg/kg dry weight
	Copper	EPA 3050B (Digestion Method) and EPA 6020B	≤ 1.00	mg/kg dry weight
	Lead	EPA 3050B (Digestion Method) and EPA 6020B	≤ 0.50	mg/kg dry weight
	Mercury	EPA 3050B (Digestion Method) and EPA 7471	≤ 0.05	mg/kg dry weight
	Zinc	EPA 3050B (Digestion Method) and EPA 6020B	≤ 2.00	mg/kg dry weight
3 – Polycyclic Aromatic Hydrocarbons (PAH)	Acenaphthene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
	Acenaphthylene	Gas Chromatography/Mass Spectrometry (GC/MS) or	≤ 0.05	mg/kg dry weight



	EPA 8270D or EPA 8270E		
Anthracene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
Benzo(a)anthracene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
Benzo(a)pyrene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
Benzo(b)fluoranthene or Benzo(b,j)fluoranthene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
Benzo(g,h,i)perylene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
Benzo(k)fluoranthene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
Chrysene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
Dibenz(a,h)anthracene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
Fluoranthene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight



	Fluorene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
	Indeno(1,2,3-cd)pyrene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
	Naphthalene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
	Phenanthrene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
	Pyrene	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.05	mg/kg dry weight
	Total PAH (EPA 16)	Gas Chromatography/Mass Spectrometry (GC/MS) or EPA 8270D or EPA 8270E	≤ 0.20	mg/kg dry weight

Table A3: Detection limits required for dioxin and furan analytes by analytical method EPA 1613B.

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Insert:

2,3,7,8-TCDD	≤ 0.5
1,2,3,7,8-PECDD	≤ 0.5
1,2,3,4,7,8-HXCDD	≤ 0.5
1,2,3,6,7,8-HXCDD	≤ 0.5
1,2,3,7,8,9-HXCDD	≤ 0.5
1,2,3,4,6,7,8-HPCDD	≤ 0.5
OCDD	≤ 1,0
2,3,7,8-TCDF	≤ 0.5



1,2,3,7,8-PECDF	≤ 0.5
2,3,4,7,8-PECDF	≤ 0.5
1,2,3,4,7,8-HXCDF	≤ 0.5
1,2,3,6,7,8-HXCDF	≤ 0.5
1,2,3,7,8,9-HXCDF	≤ 0.5
2,3,4,6,7,8-HXCDF	≤ 0.5
1,2,3,4,6,7,8-HPCDF	≤ 0.5
1,2,3,4,7,8,9-HPCDF	≤ 0.5
OCDF	≤ 1,0

¹ Reporting includes the concentration and individual 1998 World Health Organization toxic equivalency factor (TEF) of each analyte, as well as the toxic equivalency (TEQ).

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