AND A	Environment and	Environnement et
	Climate Change Canada	Changement climatique Canada

	Title – Titre		
RETURN RESPONSES TO: RETOURNEZ VOS RÉPONSES À	Analysis of Volatile Methyl Siloxanes in Wastewater		
Response Receiving - Environment Canada / Réponse recevant – Environnement Canada <u>Ec.soumissionsbids.ec@canada.ca</u>	EC Request for Information No. /SAP No. – Nº de la demande d'information EC / Nº SAP 5000052636		
	Date of Request for Information (YYYY-MM-DD) – Date de demande d'information (AAAA-MM-JJ) 2020-07-21		
REQUEST FOR INFORMATION	Request for Information Closes (YEAR-MM-DD) - La demande d'information prend fin (AAAA- MM-JJ)	<b>Time Zone – Fuseau horaire</b> Eastern Daylight Time	
DEMANDE D'INFORMATION	at – à 1400 2020-08-11	1400 hrs	
	Address Enquiries to - Adresser toutes questions à Josee Francoeur Josee.francoeur@canada.ca		
	Telephone No. – Nº de téléphone 819-938-3822	Fax No. – № de Fax	
	<b>Destination - of Services / Destination des services</b> National Capital Region		
	Security / Sécurité Individual reliability clearance and Facility Safeguarding of documents at reliability level		
	Vendor/Firm Name and Address - Raison sociale et adresse du fournisseur/de l'entrepreneur		
	Telephone No. – N° de téléphone	Fax No. – N° de Fax	
	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	

# Request for Information Analysis of Volatile Methyl Siloxanes in Wastewater

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# 1. Background and Purpose

## 1.1 Introduction

# 1.1 BACKGROUND

Environment and Climate Change Canada (ECCC) has among its mandates the assessment, management, and enforcement of the uses of chemical substances in Canada. Among these substances, certain volatile methyl siloxanes (VMS) have been assessed under the Chemicals Management Plan (CMP) and deemed to require management and enforcement (e.g. Environment Canada and Health Canada 2008, Canada 2012). Examples of the chemical and toxicological research underpinning these assessments may be reviewed in *Cyclic Volatile Methylsiloxanes in the Environment* (Alaee et al 2013). Within ECCC these activities are carried out by:

- Wastewater Science Unit, Emerging Priorities Division, Science & Technology Branch, who conduct periodic monitoring of substances in wastewater treatment systems across Canada;
- Plastics and Chemicals Unit, Chemical Production Division, Environmental Protection Branch, who implemented the risk management instrument (a pollution prevention notice) and are responsible for periodic measurement of its performance in achieving the risk management objective;
- Enforcement Branch, who conduct periodic testing of industrial effluents to determine compliance with pollution prevention notices.

In order to carry out these activities, ECCC requires high-quality analysis of industrial and municipal wastewaters for VMS.

# 1.2 Request for Information (RFI) Purpose or Scope

This Request for Information (RFI) seeks information from industry on its interest, capacity and ability to complete analytical testing of Canadian Municipal Wastewater for volatile methyl siloxanes (VMS); and to provide industry with the opportunity to give feedback on the procurement strategy.

# 2. Response Information

# 2.1 Objectives of this RFI

A RFI is used when detailed information and feedback are required from respondents. This request outlines a potential requirement, and requests respondents to describe their ability to satisfy all or a portion of the requirements and to provide ideas and suggestions on how a solicitation might be structured. Responses will be used to assist ECCC to finalize its plan for the requirement and to develop achievable objectives and deliverables.

The main objectives of the RFI are to:

- a) Inform the Department on potential options for external services that meet the needs of the requirement;
- b) Offer suggestions regarding potential alternative solutions that would meet requirements, such as solution with a lower environmental impact;
- c) Provide information to assist the Department to determine whether to proceed with requirements/strategy as planned, and if so, further developing internal planning, approval and solicitation documents that may potentially lead to a solicitation;
- d) Refine the procurement strategy, project structure, cost estimate, timelines, requirements definition, and other aspects of the requirement;
- e) Become a more "informed buyer" with an enhanced understanding of industry goods and service offerings in the areas of interest; and
- f) Assess potential alternative solution concepts that would meet its requirement, such as environmentally preferable solutions.

# 2.2 Nature of RFI

This RFI will not necessarily result in any procurement action. This RFI is for informational purposes only and does not constitute a commitment by the Government of Canada. Responses to this RFI will not constitute a commitment from the industry provider. Potential suppliers of any goods or services described in this RFI should not allocate resources or incur undue costs as a result of any information contained in this RFI. Nor will this RFI result in the creation of any source list. Therefore, whether or not any potential supplier responds to this RFI will not preclude that supplier from participating in any future procurement.

This RFI contains draft requirements that may be used in future procurement action. This document remains a work in progress and respondents should not assume that requirements will not be added, changed or removed from any bid solicitation that is ultimately published by ECCC. Comments regarding any aspect of the requirements are welcome.

# 2.3 Confidentiality

All information obtained with this RFI will be treated as confidential.

a) Although ECCC is seeking detailed responses from respondents to this RFI, it is understood that respondents may not be willing or able to address all of the information sought by ECCC.

- b) Nevertheless, and in an effort to encourage respondents to be as forthcoming as possible, it is understood and agreed that ECCC shall, during and after the period of the RFI, treat as confidential and not divulge, unless authorized in writing by respondents, any information obtained from respondents that has been identified by respondents as "confidential" or "proprietary", within their written response to this RFI.
- c) Although one of the primary purposes of this RFI is to obtain information and recommendations directly from industry knowledge leaders that will be used to support ECCC's preparation in project planning, ECCC will in no way make any direct attribution of any information obtained from respondents that has been identified by respondents as "confidential" or "proprietary" within their responses.
- d) ECCC will also not impose any future obligations or commitments on respondents with respect to claims or cost information contained within their responses to this RFI.

## 2.4 Response Costs

ECCC will not reimburse any respondent for expenses incurred in the preparation of responses to this RFI. This RFI will not result in the award of any contract. Potential suppliers of any goods or services described in this RFI should not reserve stock or facilities, nor allocate resources, as a result of any information contained in this RFI.

## 2.5 Process to Submit Responses and Closing Date

- 1. Responses are to be submitted electronically to the Contracting Authority.
- 2. It is requested that responses are not submitted by facsimile (fax) or physical mail, but rather only in softcopy format, submitted to the electronic mailing address on the front cover page.
- 3. Any response submitted will become the sole property of the Government of Canada and will not be returned to the Respondent. The response will be used to assist Environment and Climate Change Canada in further analysing the presented requirement and, as such, may be used in the development of a future solicitation process to be posted on Buy and Sell.
- 4. Because this is not a bid solicitation, Canada will not necessarily respond to enquiries in writing or by circulating answers to all potential suppliers. However, respondents with questions regarding this RFI may direct their enquiries to:

Contracting Authority: Josee Francoeur Email Address: josee.francoeur@canada.ca

5. Responses are required by the closing date: 2020-08-11 at 1400

#### 2.6 Response Structure

- a) **Cover Page**: Respondents are requested to indicate on the front cover page the RFI number and the full legal name of the Respondent, as well as the title of the response.
- b) Title Page: The first page after the cover page, should be the title page should contain:
  - (i) the title of the Respondent's response;
  - (ii) the name and address of the Respondent;

- (iii) the name, address and telephone number of the Respondent's contact;
- (iv) the date; and
- (v) the RFI number.
- c) Response Template: In order to facilitate a consistent and structured assessment of the information provided to the Department within the responses, respondents are asked to structure their responses to match the order in which questions are asked in the "Response Template" in Section 3 and Annex A of this RFI package.

Respondents are requested to provide comments, concerns and, where applicable, alternative recommendations, regarding how the requirements or objectives described in this RFI could be satisfied. Respondents are also invited to provide comments regarding the content, format and/or organization of any draft documents included in this RFI. Respondents should explain any assumptions made in their responses.

Any functionality identified by respondents must be based upon the most recent release of a product that is currently commercially available.

- d) Documentation and Number of Copies: Respondents are requested to provide one (1) softcopy of their response and one (1) softcopy of any product datasheets, user, system and/or other manuals that describe the functionality and technical specifications of the Respondent's product / solution. The documentation should be in one of the following file formats PDF, MS Word or HTML.
- e) Additional Capabilities: Respondents may also provide explanations of additional functionality (e.g. functionality not mentioned in Section 3 that the supplier believes may be relevant to the Department's business requirements) or extended capabilities (e.g. functionality that exceeds the requirements set out in Section 3). Respondents wishing to provide such information are asked to clearly identify where their response deviates from the RFI template, and may include with their submission a separate attachment that clearly itemizes additional functionality elements and extended capabilities, providing a brief description and including page references where more complete descriptions can be found in their documentation.
- f) Numbering System: Respondents are requested to prepare their response using a numbering system corresponding to the one in the Response Template in Section 3 of this RFI. All references to descriptive material, technical manuals and brochures included as part of the response should be referenced accordingly.
- g) Complete Responses: Respondents are requested to address all concepts outlined in the Response Template in Section 3 of this RFI package where possible, however responses will still be accepted if the proposed solution only meets part of the requirements. It is preferable that respondents clarify up front which aspects can be met, and why others are out of scope.
- h) Product brochures and other vendor documentation provided without an RFI response will not be evaluated. ECCC reserves the right to determine which RFI response will be evaluated based on the quality and completeness of the responses received.

#### 2.7 Treatment of Responses

- a) Use of Responses: Responses will not be formally evaluated. However, the responses received may be used by ECCC to develop or modify procurement strategies or any draft documents contained in this RFI. ECCC will review all responses that are received by the RFI closing date.
- b) Review Team: A review team composed of representatives of ECCC will review the responses. ECCC reserves the right to hire any independent consultant, or use any Government resources that it considers necessary to review any response. Not all members of the review team will necessarily review all responses.
- c) Confidentiality: Respondents should mark any portions of their response that they consider Proprietary or Confidential. ECCC will handle the responses in accordance with the Access to Information Act.

Although one of the primary purposes of this RFI is to obtain information directly from industry that will be used by ECCC to develop or modify procurement strategies or any draft documents contained in this RFI, ECCC will in no way make any direct attribution of any information obtained from respondents that has been identified by respondents as "confidential" or "proprietary" within their Responses.

d) Follow-up Activity: Should respondents include information which is of particular relevance and interest to ECCC, and should ECCC (at its exclusive option) determine that follow-on clarification meeting(s) with one or more respondents would be of potential benefit to ECCC, then ECCC may (at its exclusive option) invite selected respondents to participate in one-on-one "clarification meeting(s)" to provide clarification on their response(s), demonstrate their technologies or make a presentation to ECCC Representatives, in order for ECCC to learn more about the capabilities and features of their Response.

In the event of such an occurrence, any requested clarification meetings may take place at ECCC's facilities, location to be determined, or may take place via teleconference or other mutually convenient means, as agreed to between ECCC and the selected respondents.

ECCC will not reimburse any respondent for expenses incurred in responding to this RFI. Respondents will be responsible for all costs associated with the preparation and submission of any response to this RFI, including any costs associated with accepting ECCC's invitation(s) to participate in any clarification meeting(s).

# 2.8 Reserved Rights

In addition to any other expressed or implied rights, ECCC reserves the right to:

- a) Cancel this RFI process at any time;
- b) Issue a new RFI for the same or similar information;
- c) Change the structure of the RFI process;
- d) Vary or extend any date or time in this RFI at any time, and for such period as ECCC, in its absolute discretion, considers appropriate;
- e) Make changes, including substantial changes to the requirements as described in this RFI. Substantial changes will be communicated to all potential respondents;
- f) Request written clarification or the submission of supplementary information from any or all respondents, or provide additional information or clarification;

- g) Contact any customer or reference provided within a respondent's response, as part of its assessment process (contacting references); and
- Not consider any response which contains information which ECCC (in its exclusive opinion) believes to contain misrepresentations or any other inaccurate, suspicious or misleading information.

# 3. Response Template – Requirements

In order to gain the greatest value from responses to this RFI and to facilitate a consistent and structured assessment of the information provided to ECCC, respondents are asked to structure their responses in accordance with the following sections and the Statement of Work outlined in Annex A.

# 3.1 Corporate Profile

Please provide basic information on the company providing the Response, including:

- a) number of years in business;
- b) countries in which the Respondent does business;
- c) identity, including a brief description and location, any partners in Canada;
- d) revenues (most recently completed fiscal year);
- e) number and location of Canadian offices;
- f) number of staff currently employed, and any sub-contracting relationships;
- g) other related business lines/products;
- h) recent corporate highlights (e.g. accomplishments, awards, etc.); and
- i) level of government security clearance, if available.

## 3.2 Product Profile

Please provide information on any products recommended as part of the requirement, including:

- a) year in which product(s) was first released;
- b) number or frequency of new releases since first released;
- c) number of current installations;
- d) major clients and an indication of the extent of use of the product by the clients (also, where possible, provide a named individual agreeable to being contacted as a client reference);
- e) links to recent articles, reviews, press releases concerning the product(s); and
- f) testimonials or case studies describing customer successes.

# 4. Reference Documents

<Include if applicable>

# Annex A

# **Statement of Work**

## Analysis of Volatile Methyl Siloxanes in Wastewater

#### 1.0 BACKGROUND

Environment and Climate Change Canada (ECCC) has among its mandates the assessment, management, and enforcement of the uses of chemical substances in Canada. Among these substances, certain volatile methyl siloxanes (VMS) have been assessed under the Chemicals Management Plan (CMP) and deemed to require management and enforcement (e.g. Environment Canada and Health Canada 2008, Canada 2012). Examples of the chemical and toxicological research underpinning these assessments may be reviewed in *Cyclic Volatile Methylsiloxanes in the Environment* (Alaee et al 2013). Within ECCC these activities are carried out by:

- Wastewater Science Unit, Emerging Priorities Division, Science & Technology Branch, who conduct periodic monitoring of substances in wastewater treatment systems across Canada;
- Plastics and Chemicals Unit, Chemical Production Division, Environmental Protection Branch, who implemented the risk management instrument (a pollution prevention notice) and are responsible for periodic measurement of its performance in achieving the risk management objective;
- Enforcement Branch, who conduct periodic testing of industrial effluents to determine compliance with pollution prevention notices.

In order to carry out these activities, ECCC requires high-quality analysis of industrial and municipal wastewaters for VMS.

## 2.0 OBJECTIVE

The objective of this contract is to obtain high-quality analysis of VMS in industrial and municipal wastewaters to contribute to the fulfilment of ECCC's obligations in management of these substances.

## 3.0 SCOPE OF WORK

#### 3.1 Contractor Experience

Wastewater matrices are complex. High-quality analyses are achieved through experience. The contractor will demonstrate the extent of their experience with analysis of wastewaters for VMS.

#### 3.2 Certification and Accreditation

According to the Laboratory Directory of the Canadian Association for Laboratory Accreditation (<u>www.cala.ca</u>), no laboratories in Canada are accredited for analysis of VMS in water. The International Standards Organization (ISO) has published standard #17025: General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:2017). In order to obtain high-quality analyses of VMS for this work, preference will be given to laboratories who are certified under ISO 17025.

## 3.3 Sampling Protocol

The contractor will provide a Standard Operating Procedure (SOP) for collection of wastewater samples for analysis of VMS. This SOP must specify the type of containers, required sample volume, collection

instructions, sample preservation, sample holding times, and shipment instructions. ECCC will provide sampling and shipping containers and cover shipping costs. All sampling will be completed by ECCC personnel.

#### 3.4 Analyses

The contractor will provide a copy of their complete analytical method, including all quality assurance and quality control elements such as acceptable ranges for blank levels, laboratory spike recoveries, surrogate recoveries, and duplicate sample results. This method will achieve high-quality analysis of industrial and municipal wastewater influents and effluents according to the requirements listed in Table 1. The analytical method will achieve a Method Detection Limit (MDL) equal to or lower than that listed in Table 1.

The contractor will participate in a comparison study with ECCC's National Laboratory for Environmental Testing (NLET). The 2 labs will exchange standards of D4 and prepare and run 4 "spiked blank" samples covering the range of 10, 5, 1.0 and 0.5  $\mu$ g/L. Results from the 2 labs must match within 30%; if not the study will be repeated.

Method component	Requirement
Batch size	12 or fewer samples
Laboratory blank*	1 per batch
Laboratory spiked blank*	1 per batch
Laboratory duplicate sample*	1 per batch
Analytical target	Octamethylcyclotetrasiloxane (D4)
	Other cyclic and linear siloxanes if available in the standard
	laboratory method, e.g. D3, D5, D6, L2, L3, L4, L5, M4Q
Labeled surrogate	<sup>13</sup> C <sub>4</sub> – octamethylcyclotetrasiloxane ( <sup>13</sup> C <sub>4</sub> -D4)
	Others if available, matching the analytical targets
Analytical approach	Headspace extraction GC/MS
	Membrane-assisted solvent extraction GC/MS
	Or similar method fit for purpose (appropriate for matrix and
	analytes) using stable isotope dilution technique
Method Detection Limit	D4: 2.0 μg/L
(Canada 2012)	Or lower
(see definition below)	
Accuracy	± 30% maximum recovery range of labeled surrogate
(Canada 2012)	(i.e. 70% to 130%)
Precision	± 30% maximum difference between laboratory duplicate samples
(Canada 2012)	

Table 1: Analytical requirements for VMS

\*these quality control elements are part of the method. They are not considered "samples" and must not be included in invoices.

Method Detection Limit is defined as the level of analyte in a sample matrix that, when processed through the complete analytical method, can be measured and reported with 99% probability that it is greater than zero.

 $MDL = t_{n-1,\alpha_1=0.01} \times s$ 

where s is the standard deviation of 7 replicate extractions of the same sample (Knoerr et al 2017).

Laboratory raw data, chromatograms, and all relevant laboratory notes must be retained by the Contractor for a minimum period of 36 months following submission of samples. Raw data must include chromatograms and area tables for all instrument calibrations including linearity, resolution, and sensitivity checks showing date and time of analysis, and evidence that all QA/QC specifications have

been met; and aliquot masses or volumes for all samples, including original and re-analyses, dilutions, and other details of the analytical procedure.

The Contractor will provide consultation on sampling procedures, delivery schedules, unexpected analytical results, and other contingencies as requested by the Technical Authority.

#### 3.5 Reports

The contractor will provide written confirmation of sample receipt to the Scientific Authority within five (5) business days of sample receipt.

The contractor will deliver reports of analytical results in the standard format of the laboratory and certified by the appropriate laboratory authority, to the Scientific Authority. Reports will include:

- concentrations of each analyte in the samples and replicates;
- concentrations of each analyte in the method blank;
- per cent recoveries in spiked blanks;
- the MDL for each analyte;
- percent recovery of surrogates;
- any problems with samples or data, including corrective actions taken, resolutions, and explanation of flagged data.

Reports are subject to the acceptance and approval of the Scientific Authority.

#### 3.6 Participating in Legal Investigations or Proceedings

In the event that a compliance verification case results in an investigation or court proceedings, the contractor will participate as a technical expert in the area of methodology, analysis, and results. This level of effort required will depend on the case and can include producing an affidavit, answering questions from ECCC Enforcement Branch or the Crown prosecutors. Although it rarely happens, the contractor may be needed as a witness in court proceedings.

#### 4.0 LANGUAGE OF WORK

All oral and written communications for this work will be in English.

#### 5.0 DELIVERABLES

The deliverables from this Work will include:

- Confirmation of sample receipts within five (5) business days of sample receipt
- Analytical results reports within four (4) weeks of sample receipt

#### 6.0 SCHEDULING/MILESTONES

The duration of this contract shall be from the date of award to 31 March 2025.

#### 7.0 TRAVEL CONSIDERATIONS

All work will take place at the contractor's facility. Project meetings will take place by conference call. The contractor is not required to travel for this work.

#### 8.0 BASIS OF PAYMENT

The estimated sample load is 100 to 130 samples per year. The maximum allocation for this contract is \$100,000, i.e. approximately \$20,000 per year.

The price per sample must be firm and all-inclusive, i.e. including quality assurance and quality control measures as described above.

The cost of the comparison study will be borne by each laboratory (the contractor and ECCC), i.e. each lab will purchase, prepare, and ship their standards, and complete their analyses at their own cost.

The contractor will issue invoices to ECCC at the conclusion of each analytical batch, or at the close of the contractor's billing periods, with all invoices for each Government fiscal year issued by March 31. Invoices will be paid upon acceptance and approval by the Scientific Authority.

For any participation in legal investigations or proceedings, the contractor's costs will be reimbursed by ECCC Enforcement Branch. These costs will be quoted and invoiced separately on a case-by-case basis.

#### 9.0 INTELLECTUAL PROPERTY

The Intellectual Property (IP) from this contract consists of the results of analyses. Since the main purpose of this contract is to generate IP and regulatory information that is intended for either public dissemination or regulatory enforcement, the IP will rest with the Crown.

#### 10.0 CROWN INPUT

As noted above, all sampling activities, equipment, and supplies will be provided by ECCC. ECCC will also generate trip blanks, field blanks, and equipment blanks as part of this project, which will be submitted and invoiced as samples.

#### 11.0 SECURITY

The Contractor must, at all times during the performance of the Contract, hold a valid Designated Organization Screening (DOS) with approved Document Safeguarding at the level of PROTECTED B, issued by the Canadian Industrial Security Directorate, Public Works and Government Services Canada.

All Contractor personnel working on the project must EACH hold a valid RELIABILITY STATUS, granted or approved by the Canadian Industrial Security Directorate, Public Works and Government Services Canada.

#### 12.0 REFERENCES

Alaee M, DG Wang, T Gouin. 2013. Cyclic Volatile Methylsiloxanes in the Environment, *Chemosphere* 93 #5 special issue.

Canada. 2012. Notice requiring the preparation and implementation of pollution prevention plans in respect of Cyclotetrasiloxane, octamethyl- (siloxane D4) in industrial effluents. <u>http://www.gazette.gc.ca/rp-pr/p1/2012/2012-06-02/html/sup2-eng.html</u> Environment Canada and Health Canada. 2008. Screening assessment for the Challenge: octamethylcyclotetrasiloxane (D4). CAS #556-67-2. <u>http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=2481B508-1</u>

ISO/IEC. 2017. Standard 17025: General requirements for the competence of testing and calibration laboratories. <u>https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100424.pdf</u>

Knoerr SM, JA Durham, DA McNett. 2017. Development of collection, storage and analylsis procedure for the quantification of cyclic volatile methylsiloxanes in wastewater treatment plant effluent and influent. Chemosphere 182, 114-121.

# **Mandatory and Rated Criteria**

The Contractor must demonstrate that they have a thorough understanding and extensive experience with wastewater matrices and are able to generate technically valid results.

Only information contained in the proposal will be evaluated. Bidders must include all relevant information in their proposals. Evaluators will not consult other information sources (e.g. websites) unless they are specifically referenced in the proposal.

## Mandatory Criteria

No.	Description	Meet / does not meet
M1	<ul> <li>The bidder must provide a Standard Operating Procedure for sampling industrial and municipal wastewaters, including:</li> <li>descriptions of sample container types,</li> <li>required sample volume,</li> <li>collection instructions,</li> <li>sample preservation,</li> <li>holding times, and</li> <li>shipment instructions.</li> </ul>	
M2	<ul> <li>The bidder must provide a validated analytical method for analysis of VMS in industrial and municipal wastewaters. Methods for non-potable water, environmental waters, or any other matrices are not considered equivalent to industrial or municipal wastewater influents and effluents. The method must include: <ul> <li>holding time and storage conditions for received samples,</li> <li>batch size and make-up,</li> <li>details of sample preparation, extraction, and cleanup procedures (where appropriate),</li> <li>instrument specifications,</li> <li>positive identification criteria<sup>1</sup>,</li> <li>quantification references,</li> <li>procedure for analyte quantification<sup>2</sup>,</li> <li>description of method detection limit<sup>3</sup>,</li> <li>description of quality assurance and quality control (QA/QC) system,</li> <li>QA/QC criteria (e.g. blank levels, acceptable recovery ranges).</li> </ul> </li> <li><sup>1</sup>Positive identification criteria must include a) identification of the surrogate internal standard for each native compound, b) the required signal to noise ratio for the selected ions for native compound, b) the required signal to noise ratio standard.</li> <li><sup>2</sup>Isotope dilution / recovery correction techniques must be used for quantification of all analytes in Table 1.</li> <li><sup>3</sup>Method detection limit must be determined using a statistical approach, such as described by Knoerr et al (2017).</li> </ul>	
М3	The analytical method must include octamethylcyclotetrasiloxne (D4) and $^{13}\text{C}_{4}\text{-}$ D4	

M4	The analytical method must achieve the specified method detection limit of 2.0 $\mu\text{g/L}.$	
M5	The analytical approach is fit for purpose, i.e. appropriate for the matrix and analytes, and uses stable isotope dilution techniques. (will be assessed by Dr. Mehran Alaee of ECCC)	
M6	The bidder must provide a statement confirming their participation in a comparison study with ECCC-NLET under the conditions specified.	
M7	The bidder must provide a statement confirming their commitment to participate in legal investigations or appear in court proceedings as a technical expert for methodology, analysis and results.	
M8	The bidder must provide a statement confirming that they hold a valid Designated Organization Screening (DOS) with approved Document Safeguarding at the level of PROTECTED B.	
M9	The bidder must provide a list of all personnel who might work on this project and confirm that EACH person holds a valid RELIABILITY STATUS, granted or approved by the Canadian Industrial Security Directorate, Public Works and Government Services Canada.	

Failure to meet any one of the mandatory criteria makes the bid non-compliant and results in it being set aside.

# **Point-rated Criteria**

No.	Description	Scoring Methodology	Points
R1	The Bidder should demonstrate experience conducting trace analysis of VMS in industrial and municipal wastewater influent and effluent samples within the past 10 years. Analysis undertaking prior to method validation is not considered as demonstrated experience.	The Bidder should provide a summary of the number of wastewater samples analyzed for D4. The summary should include the client name, date range of the project (since Jan 1, 2010), and number of samples. Bidders will receive 1 point per sample, to a maximum of 100 points.	100
R2	<ul> <li>The contractor's lab has a current accreditation to ISO 17025, valid at the time of bid closing, with evidentiary documentation provided.</li> <li>This standard contains the requirements that testing and calibration laboratories must demonstrate that they operate a management system, are technically competent, and are able to generate technically valid results that are fit for purpose. This standard does not specify chemical parameters.</li> </ul>		10
R3	The Bidder's analytical method includes other VMS: D3, D5, D6, L2, L3, L4, L5, M4Q, etc.	The Bidder will receive 2 points per additional analyses, to a maximum of 10 points.	10

R4	The Bidder's analytical method includes labeled surrogates for other VMS matching their response to criteria R3.	The Bidder will receive 2 points per additional analyses, to a maximum of 10 points.	10
R5	The Bidder should demonstrate experience and proficiency as reflected in the MDL achieved by their validated methods submitted under M2.	Bidders with MDL at least 50% below the mandatory value (i.e. $1.0 \ \mu g/L$ ) will receive 5 points. MDL at least $10x$ lower than the mandatory value (i.e. $0.2 \ \mu g/L$ ) will receive 10 points.	10
R6	The Bidder should demonstrate experience as a witness or technical expert in the context of legal prosecutions, compliance verification, and enforcement, where their work was used as evidence.	The Bidder should provide examples of experience, including case name and brief description of their involvement. Bidders will receive 10 points per experience to a maximum of 30 points.	30
	Total points available		170

Proposals must achieve a minimum score of 70 points for criteria R1, a minimum score of 10 points for R6, and a minimum score of 90/170 (52.9%) overall. In the event of tying scores, the highest score for criteria R1 will be used to decide the winning bid.

# Basis of Selection - highest combined rating technical merit (70%) and Price (30%)

## INDUSTRY ENGAGEMENT QUESTIONS

## SECTION 1: Statement of Work (SOW)

- 1.1 Please provide a statement regarding your capability to meet the requirements.
- 1.2 Are any aspects of the SOW unclear?
- 1.3 Are the delivery timelines detailed in the SOW reasonable?
- 1.4 Does the SOW have enough information for Bidders to submit a quality bid?
- 1.5 What, if any, additional information would you need to see included in the SOW?
- 1.6 Are you currently capable of providing a validated method for D4 and other cyclic and linear VMS?
- 1.7 Are you currently capable of achieving the minimum required reporting limits for D4? If not, which reporting limits can you achieve?
- 1.8 Is it clear in the SOW how to report the results?
- 1.9 Are the descriptions of "method detection limit" and "limit of quantification" clear and appropriate for this group of compounds?

## **SECTION 2:** Evaluation Criteria

- 2.1. Is it clear how Canada proposes to evaluate the bids?
- 2.2 Is it clear what information you must provide in your proposal to obtain the maximum

points?

- 2.3 Are there any elements of the evaluation that you believe should be modified?
- 2.4 Are there any elements you believe should be added to the evaluation?
- 2.5 Are there any elements that you believe do not add value to the evaluation process?
- 2.6 Provide any suggestions that, in your opinion, could improve the evaluation so as to

ensure that Canada obtains high-quality analyses of D4 and other cyclic and linear VMS.

## **SECTION 3: Basis of Selection**

- 3.1 Does the Basis of Selection seem fair and reasonable?
- 3.2 Is the ratio between Technical Merit and Price reasonable?
- 3.3 Provide any suggestions that, in your opinion, could improve the contractor selection methodology.

## SECTION 4: Other

- 4.1 Please identify any other issues, concerns, recommendations not addressed above.
- 4.2 Will you submit a proposal for this requirement? If not, why?