



**Return Bids to :**

**Retourner Les Soumissions à :**

Natural Resources Canada

**Bid Receiving Natural Resources Canada**

See herein for bid submission instructions

This bid solicitation cancels and supersedes previous bid solicitation number 500006273 dated September 29, 2021 with a closing of November 8, 2021 at 02:00 PM EDT.

**Request for Standing Offer**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services and construction listed herein and on any attached sheets at the price(s) set out.

**Comments :**

**Issuing Office**

Finance and Procurement Branch  
Natural Resources Canada  
1 Challenger Drive  
Dartmouth, Nova Scotia  
B2Y 4A2

<b>Title</b> <b>Geochemical Analysis of Sediment, Rock and Vegetation Samples</b>	
<b>Solicitation No.</b> <b>NRCan-5000062073 (B)</b>	<b>Date</b> January 26, 2022
<b>Client Reference No.</b> 5000062073	
<b>Requisition Reference No.</b> 167506	
<b>Solicitation Closes</b> <b>at – à 02:00 PM EDT</b> <b>on – le February 24, 2022</b>	
<b>Address Enquiries to: -</b>  <b>Julia Pace</b> <a href="mailto:julia.pace@nrcan-rncan.gc.ca">julia.pace@nrcan-rncan.gc.ca</a>	<b>Buyer ID</b>  <b>BU5</b>
<b>Telephone No.</b> (902-719-4856)	<b>Fax No.</b>
<b>Security</b> This Standing Offer does not have a security requirement	
If marked "X" please see the box to the left <input checked="" type="checkbox"/> Acknowledgement copy required	
<b>Destination – of Goods, Services and Construction:</b>  Natural Resources Canada 601 Booth Street Ottawa, Ontario K1A0E8	
<b>Vendor/Firm Name and Address</b>          <b>Telephone No.:</b> _____ <b>Email :</b> _____	
<b>Name and Title of person authorized to sign on behalf of Vendor/Firm (type or print)</b>          _____ <b>Signature</b>          _____ <b>Date</b>	



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## PART 1 – GENERAL INFORMATION

### 1.1 Introduction

The Request for Standing Offers (RFSO) is divided into seven parts plus attachments and annexes, as follows:

**Part 1 General Information:** provides a general description of the requirement;

**Part 2 Offeror Instructions:** provides the instructions applicable to the clauses and conditions of the RFSO;

**Part 3 Offer Preparation Instructions:** provides Offerors with instructions on how to prepare their offer to address the evaluation criteria specified;

**Part 4 Evaluation Procedures and Basis of Selection:** indicates how the evaluation will be conducted, the evaluation criteria which must be addressed in the offer, and the basis of selection;

**Part 5 Certifications:** includes the certifications to be provided;

**Part 6 Security, Financial and Insurance Requirements:** includes specific requirements that must be addressed by Offerors; and

**Part 7 7A, Standing Offer, and 7B, Resulting Contract Clauses:**

**7A,** includes the Standing Offer containing the offer from the Offeror and the applicable clauses and conditions;

**7B,** includes the clauses and conditions which will apply to any contract resulting from a call-up made pursuant to the Standing Offer.

The Annexes include:

**Annex “A”** - Statement of Work

**Annex “A-1”** – Statement of Requirement

**Annex “A-2”** – Precision and Accuracy Tolerances

**Annex “B”** - Basis of Payment

**Annex “C”** – Quarterly Standing Offer Agreement (SOA) Report

**Annex “D”** – Vendor Performance

**Annex “E”** – Non-Disclosure Agreement

**Annex “F”** – Data Report Sheet

**Annex “G”** - Ranking

### 1.2 Summary

By means of this RFSO, Natural Resources Canada (NRCan) is seeking proposals from Bidders, on an “as and when required” basis for high quality geochemical analysis of diverse types of organic and inorganic geological samples, including, but not limited to: sediments, soils, rocks, heavy mineral concentrates, humus, peat, and leaf litter for the following streams:

- Stream 1: Major and trace element packages;
- Stream 2: Neutron activation analysis;
- Stream 3: Lithogeochemistry of mineralized samples
- Stream 4: Hydrogeochemical packages

The period of the Regional Standing Offer will be for a **two year period with Option periods.**



**1.2.1** This bid solicitation allows bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

### **1.3 Security Requirement**

There is no security requirement associated with this Request for Standing Offer or any resulting call-ups issued against awarded Standing Offers.

### **1.4 Debriefings**

After issuance of a standing offer, Offerors may request a debriefing on the results of the request for standing offers process. Offerors should make the request to the Standing Offer Authority within 15 working days of receipt of the results of the request for standing offers process. The debriefing may be in writing or by telephone.



## PART 2 – OFFEROR INSTRUCTIONS

### 2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the Request for Standing Offers (RFSO) by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Offerors who submit an offer agree to be bound by the instructions, clauses and conditions of the RFSO and accept the clauses and conditions of the Standing Offer and resulting call-ups issued against the Standing Offer, otherwise known as contract(s).

The **2006 (2020-05-28)** Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the RFSO.

- In the complete text content (except Section 3) Delete: “Public Works and Government Services Canada” and Insert: “Natural Resources Canada.” Delete: “PWGSC” and Insert: “NRCan”
- Section 2: Delete: “Suppliers are required to” and Insert: “It is suggested that suppliers”
- Subsection 1 of Section 8: Delete entirely
- Subsection 2 of Section 8:  
Delete: The only acceptable email address to use with epost Connect for responses to bid solicitation issued by PWGSC headquarters is: [tpsgc.dgareceptiondessoumissions-abbidReceiving.pwgsc@tpsgc-pwgsc.gc.ca](mailto:tpsgc.dgareceptiondessoumissions-abbidReceiving.pwgsc@tpsgc-pwgsc.gc.ca), or, if applicable, the email address identified in the bid solicitation. The only acceptable email address to use with epost Connect for responses to bid solicitations issued by PWGSC regional offices is identified in the bid solicitation.  
Insert: The only acceptable email address to use with epost Connect for responses to bid solicitation issued by NRCan is: [procurement-appvisionnement@NRCan-RNCan.gc.ca](mailto:procurement-appvisionnement@NRCan-RNCan.gc.ca)
- Under Subsection 2 of Section 20: Not applicable
- Sub-Section 5.4 - Submission of Offers of 2006 (2020-05-28) Standard Instructions – Request for Standing Offers – Goods or Services – Competitive Requirements, is amended as follows:

DELETE: sixty (60) days

INSERT: one hundred and twenty (120) days

### 2.2 Submission of Offers

Bids must be submitted only to the Natural Resources Canada (NRCan) Bid Receiving Unit specified below by the date and time indicated on page 1 of the bid solicitation.

NRCan Bid Receiving Unit:

Only bids submitted using epost Connect service will be accepted.

At least 24 hours before the solicitation closes, the Bidder **MUST** send an email requesting to open an epost Connect conversation to the following address:  
[procurement-appvisionnement@NRCan-RNCan.gc.ca](mailto:procurement-appvisionnement@NRCan-RNCan.gc.ca)

**Note:** Bids will not be accepted if e-mailed directly to this address. This e-mail address is to be used to open an ePost Connect conversation, as detailed in the Standard Instructions [2003 \(Subsection 2 of Section 08\)](#), or to send bids through an ePost Connect message if the bidder is using its own licensing agreement for ePost Connect.

**IMPORTANT:** It is requested that you write the bid solicitation number in “Subject” of the email:

**NRCan – 5000062073 (B) Geochemical Analysis of Sediment, Rock and Vegetation Samples**



NRCan will not assume responsibility for proposals directed to any other location.

The onus is on the Bidder to ensure that the bid is submitted correctly using epost Connect service. Not complying with the instructions may result in NRCan's inability to ascertain reception date and/or to consider the bid prior to contract award. Therefore, NRCan reserves the right to reject any proposal not complying with these instructions.

Due to the nature of the bid solicitation, bids transmitted by mail or facsimile to NRCan will not be accepted.

## **2.3 Enquiries – Request for Standing Offers**

All enquiries must be submitted in writing to the Standing Offer Authority no later than **three (3)** business days before the Request for Standing Offers (RFSO) closing date. Enquiries received after that time may not be answered.

Offerors should reference as accurately as possible the numbered item of the RFSO to which the enquiry relates. Care should be taken by Offerors to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that Offerors do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all Offerors. Enquiries not submitted in a form that can be distributed to all Offerors may not be answered by Canada.

To comply with the [Code of Conduct for Procurement](#), bidders are obliged to alert the contracting authority to any factual errors that they discover in bid solicitations.

## **2.4 Applicable Laws**

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Offerors may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their offer, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Offerors.



## PART 3 – OFFER PREPARATION INSTRUCTIONS

### 3.1 Offer Preparation Instructions

Canada requests that Offerors provide their offer in separately bound sections as follows:

- Section I: Technical Offer (1 electronic copy)
- Section II: Financial Offer (1 electronic copy) in a separate file and document
- Section III: Certifications (1 electronic copy)
- Section IV: Additional Information (one (1) electronic copy)

**Prices should appear in the financial bid only. No prices should be indicated in any other section of the offer.**

Canada requests that Offerors follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) format;
- (b) use a numbering system that corresponds to the bid solicitation.

#### **Section I: Technical Bid**

In their technical offer, offerors should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

#### **Section II: Financial Offer**

Offerors must submit their financial offer in accordance with the Appendix 2.

#### **Section III: Certifications**

Offerors must submit the certifications and additional information required under Part 5.

#### **Section IV: Additional Information**

In Section IV of their bid, bidders should provide:

1. the 1<sup>st</sup> page of this RFSO signed with their legal name;
2. the name of the contact person (provide also this person's mailing address, phone numbers and email address) authorized by the Bidder to enter into communications with Canada with regards to their bid, and any contract that may result from their bid.





## **PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

- (a) Offers will be assessed in accordance with the entire requirement of the Request for Standing Offers including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the offers.

#### **4.1.1 Technical Evaluation**

Mandatory technical evaluation criteria are included in Appendix 1 – Evaluation Criteria.

#### **4.1.2 Financial Evaluation**

Mandatory financial evaluation criteria are included in Appendix 1 – Evaluation Criteria.

### **4.2 Basis of Selection**

#### **4.2.1 Mandatory Technical Criteria Only**

An offer must comply with the requirements of the Request for Standing Offers to be declared responsive. The responsive offer with the lowest evaluated price per stream will be recommended for issuance of a standing offer and will be ranked 1<sup>st</sup> within that Stream. The next lowest evaluated price will be ranked 2<sup>nd</sup> and so on. The same ranking setup will be used for each Stream.

- Where two (2) or more responsive proposals submit identical evaluated prices for an analytical project, the proposal that offers better detection limits for the mandatory elements in the required analytical packages will be awarded the first ranked position and the other one second ranked position.



## PART 5 – CERTIFICATIONS

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

### 5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

#### 5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity [Provisions of the Standard Instructions](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/1/2003/25#integrity-provisions) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/1/2003/25#integrity-provisions>), all bidders must provide with their bid, **if applicable**, the Integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

#### 5.1.2 Additional Certifications Required with the Bid

### 5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

#### 5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real property agreement of the [Inteligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

- Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder or, in the case of a private company, the owners of the company.
- Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).
- Bidders bidding as partnerships do not need to provide lists of names.

Name of Bidder: \_\_\_\_\_

OR

Name of each member of the joint venture:



Member 1: \_\_\_\_\_  
Member 2: \_\_\_\_\_  
Member 3: \_\_\_\_\_  
Member 4: \_\_\_\_\_

Identification of the administrators/owners:

SURNAME	NAME	TITLE

### 5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website.  
(<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>)..

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

### 5.2.3 Status and Availability of Resources

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability. Failure to comply with the request may result in the bid being declared non-responsive.

### 5.2.4 Education and Experience

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and



accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.

### 5.2.5 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

#### Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"**lump sum payment period**" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"**pension**" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

#### Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes ( ) No ( )**

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant; \_\_\_\_\_
- b. date of termination of employment or retirement from the Public Service. \_\_\_\_\_

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

#### Work Force Adjustment Directive



Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes ( ) No ( )**

If so, the Bidder must provide the following information:

- a. name of former public servant; \_\_\_\_\_
- b. conditions of the lump sum payment incentive; \_\_\_\_\_
- c. date of termination of employment; \_\_\_\_\_
- d. amount of lump sum payment; \_\_\_\_\_
- e. rate of pay on which lump sum payment is based; \_\_\_\_\_
- f. period of lump sum payment including:
  - start date \_\_\_\_\_
  - end date \_\_\_\_\_
  - and number of weeks \_\_\_\_\_
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

Professional fees

Amount

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

### 5.2.6 *Aboriginal Designation*

Who is eligible?

- a) An Aboriginal business, which can be:
  - i) a band as defined by the Indian Act
  - ii) a sole proprietorship
  - iii) a limited company
  - iv) a co-operative
  - v) a partnership
  - vi) a not-for-profit organization

in which Aboriginal persons have at least 51 percent ownership and control,

OR



- b. A joint venture consisting of two or more Aboriginal businesses or an Aboriginal business and a non-Aboriginal business(es), provided that the Aboriginal business(es) has at least 51 percent ownership and control of the joint venture.

When an Aboriginal business has six or more full-time employees at the date of submitting the bid, at least thirty-three percent of them must be Aboriginal persons, and this ratio must be maintained throughout the duration of the contract.

The bidder must certify in its submitted bid that it is an Aboriginal business or a joint venture constituted as described above.

- ☐ Our Company is NOT an Aboriginal Firm, as identified above.  
☐ Our Company is an Aboriginal Firm, as identified above.

---

**SIGNATURE**

---

**DATE**



## **PART 6 – SECURITY, FINANCIAL AND INSURANCE REQUIREMENTS**

### **6.1 Security Requirement**

There is no security requirement associated with this Request for Standing Offer, or any subsequent call-ups issued against awarded Standing Offers.

### **6.2 Insurance Requirements**

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under this Request for Standing Offer and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.



## PART 7 – STANDING OFFER AND RESULTING CONTRACT CLAUSES

### A. STANDING OFFER

#### 7.1 Offer

1.1 The Offeror offers to fulfill the requirement in accordance with the Statement of Work at Annex "A".

#### 7.2 Security Requirement

There is no security requirement applicable to this Standing Offer.

#### 7.3 Standard Clauses and Conditions

All clauses and conditions identified in the Standing Offer and resulting contract(s) by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

##### 7.3.1 General Conditions

[2005 \(2017-06-21\) - General Conditions - Standing Offers - Goods or Services](#), apply to and form part of the Standing Offer.

**Section 1 of 2005 (2017-06-21) – Interpretation**, should be amended as follows:

DELETE: Public Works and Government Services Canada  
INSERT: Natural Resources Canada

##### 7.3.2 Standing Offers Reporting

The Offeror must compile and maintain records on its provision of goods and services to Canada under contracts resulting from the Standing Offer. This data must include all purchases done by Canada, including those acquired and paid for by Canada acquisition cards.

The Offeror must provide this data in accordance with the reporting requirements detailed in Annex "C". If some data is not available, the reason must be indicated in the report. If no goods or services are provided during a given period, the Offeror must provide a "nil" report.

The data must be submitted on a quarterly basis to the Standing Offer Authority.

The quarterly reporting periods are defined as follows:

First quarter: April 1 to June 30  
Second quarter: July 1 to September 30  
Third quarter: October 1 to December 31  
Fourth quarter: January 1 to March 31

The data must be submitted to the Standing Offer Authority no later than ten (10) calendar days after the end of the reporting period.





## 7.4 Term of Standing Offer

### 7.4.1 Period of the Standing Offer

The period for making call-ups against the Standing Offer is from date of Standing Offer award to March 15, 2024.

### 7.4.2 Extension of Standing Offer

If the Standing Offer is authorized for use beyond the initial period, the Offeror offers to extend its offer up to an additional three (3) one (1) year periods under the same conditions and at the rates or prices specified in the Standing Offer, or at the rates or prices calculated in accordance with the formula specified in the Standing Offer.

The Offeror will be advised of the decision to authorize the use of the Standing Offer for an extended period by the Standing Offer Authority before the expiry date of the Standing Offer. A revision to the Standing Offer will be issued by the Standing Offer Authority.

### 7.4.3 Standing Offer Holder Performance Evaluation

NRCAN will be evaluating the performance of all Standing Offer Holders during the course of **each** awarded Call-up. The performance will be evaluated against Annex "D" – Vendor Performance Evaluation, upon completion of each call-up. The Vendor Performance Evaluation will be used to ensure the Standing Offer Holders are providing quality geochemical services under each call-up.

The purpose of the Vendor Performance Sheet is intended to promote ongoing communications with and acceptable performance from the Standing Offer Holders. The Vendor Performance Evaluation is to be used for **each** completed call-up by a selected SO Holder and the SO Holder will be provided a copy of the assessment of their performance. The SO Holder shall have the opportunity to provide comments on their scored performance. At the end of each call-up, the Vendor Performance Evaluation will be provided to the SO Holder for their response and the final score attributed by NRCAN shall be deemed final, at NRCAN's full discretion.

Failure to pass the Vendor Performance Evaluation with a score of 80% or higher could result in the SO Holder being penalized for their performance. Such penalties could result in one or more of the following:

- Meet with NRCAN, at the Vendor's expense, to review the issues and to determine how to resolve the issue(s);
- Deny inviting the SO Holder on the next two (2) opportunities, after the first two (2) scores obtained below 80%;
- Deny inviting the SO Holder on any future requirements during the full duration of the Standing Offer, including option periods, after the fourth failed score obtaining below 80%.

## 7.5 Authorities

### 7.5.1 Standing Offer Authority

The Standing Offer Authority will be:

Name: **Julia Pace**  
Title: Procurement Specialist  
Organization: Natural Resources Canada  
Address: 1 Challenger Drive, Dartmouth, NS  
Telephone: 902-719-4856  
E-mail address: [julia.pace@nrcan-rncan.gc.ca](mailto:julia.pace@nrcan-rncan.gc.ca)



The Standing Offer Authority is responsible for the establishment of the Standing Offer, its administration and its revision, if applicable. Upon the making of a call-up, as Contracting Authority, he/she is responsible for any contractual issues relating to individual call-ups made against the Standing Offer by any Identified User.

### 7.5.2 Project Authority

The Project Authority for the Standing Offer is (*identified in the call-up against the Standing Offer*).

The Project Authority is the representative of the department or agency for whom the Work will be carried out pursuant to a call-up against the Standing Offer and is responsible for all the technical content of the Work under the resulting Contract.

### 7.5.3 Offeror's Representative

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Company: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email: \_\_\_\_\_

## 7.6 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

## 7.7 Identified Users

The Identified User authorized to make call-ups against the Standing Offer is: **Natural Resources Canada**

## 7.8 Call-up Procedures

### Right of first refusal basis:

The call-up procedures require that when a requirement is identified, the identified user will contact the offeror in 1<sup>st</sup> place to determine if the requirement can be satisfied by that offeror. If the offeror in 1<sup>st</sup> place is able to meet the requirement, a call-up is made against its standing offer. If that offeror is unable to meet the requirement, the identified user will contact the offeror in the 2<sup>nd</sup> place. The identified user will continue and proceed as above until one offeror indicates that it can meet the requirement of the call-up. In other words, call-ups are made based on the "right of first refusal" basis. When the offeror in 1<sup>st</sup> place is unable to fulfill the need, the identified user is required to document its file appropriately. The resulting call-ups are considered competitive and the competitive call-up authorities can be used.

## 7.9 Call-up Instrument

The Work will be authorized or confirmed by the Identified User(s) using a call-up against a Standing Offer (942).

## 7.10 Limitation of Call-ups

Individual call-ups against the Standing Offer must not exceed **\$400,000.00** (Goods and Services Tax or Harmonized Sales Tax included).



## 7.11 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- a) The Call up Against the Standing Offer, including any annexes;
- b) The Articles of the Standing Offer;
- c) The General Conditions [2005](#) (2017-06-21), General Conditions - Standing Offers - Goods or Services
- d) the supplemental general conditions [4007 \(2010-08-16\)](#) - Canada to Own Intellectual Property Rights in Foreground Information
- e) the general conditions [2035](#) (2021-12-02) General conditions: Professional services (Higher complexity - Services);
- f) Annex "A" - Statement of Work;
- g) Annex "B" - Basis of Payment;
- h) Annex "C" – Quarterly Standing Offer Agreement (SOA) Report
- i) Annex "D" - Vendor Performance
- J) Annex "E" –Non-Disclosure Agreement
- K) Annex "F" – Data Reporting Sheet;
- l) Annex "G" - Ranking
- m) The Offeror's offer dated \_\_\_\_\_.

## 7.12 Certifications

### 7.12.1 Compliance

The continuous compliance with the certifications provided by the Offeror with its offer and the ongoing cooperation in providing associated information are conditions of issuance of the Standing Offer (SO). Certifications are subject to verification by Canada during the entire period of the SO and of any resulting contract that would continue beyond the period of the SO. If the Offeror does not comply with any certification, fails to provide the associated information, or if it is determined that any certification made by the Offeror in its offer is untrue, whether made knowingly or unknowingly, Canada has the right to terminate any resulting contract for default and set aside the Standing Offer.

## 7.13 Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.



## B. Resulting Contract Clauses

The following clauses and conditions apply to and form part of any contract resulting from a call-up against the Standing Offer.

### 7.1 Statement of Work

The Contractor must perform the Work described in the call-up against the Standing Offer.

### 7.2 Standard Clauses and Conditions

#### 7.2.1 General Conditions

[2035](#) (2021-12-02), General Conditions - Professional Services (High Complexity Complexity) apply to and form part of the Contract.

#### 7.2.2 Supplementary General Conditions

The following clauses apply to and form part of this contract:

[4007](#) (2010-08-16), Canada to Own Intellectual Property Rights in Foreground Information

### 7.3 Term of Contract

#### 7.3.1 Delivery Date

Delivery must be completed in accordance with the call-up against the Standing Offer.

### 7.4 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

### 7.5 Payment

#### 7.5.1 Basis of Payment

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work, as determined in accordance with the Basis of Payment in Annex "B", to a limitation of expenditure of \$\_\_\_\_\_ (TBD in resulting call-ups). Customs duties are included, and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable

#### 7.5.2 Limitation of Expenditure

1. Canada's total expenditure to the Standing Offer holder is not expected to exceed \$ \_\_\_\_\_. Customs duties are included and Applicable Taxes are extra.
2. . The Standing Offer holder is to notify the Contracting Authority in writing as to the adequacy of this sum:
  - a. when it is 75 percent committed, or



- b. four (4) months before the contract expiry date, or
  - c. as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,  
whichever comes first.
3. If the notification is for inadequate contract funds, the Standing Offer holder must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

### 7.5.3 Method of Payment

Once of the following methods of payment shall be used in each resulting call-up against the SO

SACC Manual clause [H1000C](#) (2008-05-12), Single Payment

SACC Manual clause [H1008C](#) (2008-05-12), Monthly Payment

### 7.5.4 SACC Manual Clauses

[A2001C](#) (2006-06-16), Foreign Nationals (Foreign Contractor)

[A2000C](#) (2006-06-16), Foreign Nationals (Canadian Contractor)

[C0711C](#) (2008-05-12), Time Verification

[C0705C](#) (2010-01-11), Discretionary Audit

## 7.6 Invoicing Instructions

Invoices shall be submitted using the following method:

E-mail:

[Invoicing-Facturation@nrcan-rncan.gc.ca](mailto:Invoicing-Facturation@nrcan-rncan.gc.ca)

**Note:** Attach "PDF" file. No other formats will be accepted

Invoices and all documents relating to a contract must be submitted on the Contractor's own form and shall bear the following reference numbers: Contract number: \_\_\_\_\_

**Invoicing Instructions to suppliers:** <http://www.nrcan.gc.ca/procurement/3485>

## 7.7 Insurance

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

## 7.8 Contract Administration

The parties understand that the Procurement Ombudsman appointed pursuant to Subsection 22.1(1) of the *Department of Public Works and Government Services Act* will review a complaint filed by *(insert "the supplier" or "the contractor" or "the name of the entity awarded this contract")* respecting administration of this contract if the requirements of Subsection 22.2(1) of the



*Department of Public Works and Government Services Act* and Sections 15 and 16 of the *Procurement Ombudsman Regulations* have been met, and the interpretation and application of the terms and conditions and the scope of the work of this contract are not in dispute. The Office of the Procurement Ombudsman may be contacted by telephone at 1-866-734-5169 or by e-mail at [boa.opo@boa-opo.gc.ca](mailto:boa.opo@boa-opo.gc.ca).



## ANNEX A – STATEMENT OF WORK

### SW1 Title

Geochemical Analysis of Sediment, Rock, Water and Vegetation Samples

### SW2 Requirement

The Geological Survey of Canada (GSC) has a requirement, on an “as and when required” basis, for high quality geochemical analysis of diverse types of organic and inorganic geological samples, including but not limited to:

- Sediments
- Soils
- Rocks
- Heavy mineral concentrates
- Humus
- Peat
- Leaf Litter
- Waters

The analyses are in support of GSC scientific research and require careful, reproducible and documented application of a range of preparation protocols, and different types of analytical instrumentation. The GSC’s Technical Authority (aka Project Authority) will monitor the quality of analytical data.

### SW3 Sample types and Concentration Ranges

The matrices of sediment, rock, water and vegetation samples submitted will be highly variable, including silicate, carbonate, ferruginous materials and their mixtures. Some elements normally present in trace or minor amounts may be present in massive concentrations in a few samples within a suite of normal samples. When known, these samples will be flagged.

The systematic reporting of high values as “greater than” an upper limit for those samples is not acceptable. If there are samples containing elements of values falling above the upper detection limit, the GSC’s Technical Authority shall be contacted to determine if further testing is required to determine and report the concentration of the element(s). The Bidder may include a reference in the text of their proposal that additional costs would be charged, but this information will not be evaluated.

### SW4 Analytical Requirements

The analytical requirements have been divided into four (4) Streams, each of which contains several mandatory packages:

- Stream 1: Major and trace element packages;
- Stream 2: Neutron activation analysis;
- Stream 3: Lithogeochemistry of mineralized samples
- Stream 4: Hydrogeochemical packages

Bidders may choose to bid on any or all of the Streams, but, to do so, must be able to offer all of the mandatory packages within each stream and at the mandatory detection limits as indicated in Annex “A-1”.

### SW5 Analytical Streams, Packages and Estimated Yearly Utilization

Mandatory packages are marked with a Red font. The estimated number of samples per analytical package per year is as follows:



Package	STREAM 1 PACKAGES Major and Trace Element Packages	Estimated Number of Samples*	Offering (provide check-mark)
1	"Whole rock" analysis; major elements by fused disk XRF or borate fusion / ICP-ES	1000	
2	Loss-on-Ignition @ 500°C	300	
3	Loss-on-Ignition @ 1000 °C	200	
4	Determination of volatiles, S and C, by combustion/infrared	500	
5	FeO by titration	400	
6	a) "Whole rock" major, minor, trace and rare earth elements by Lithium borate fusion ICP-MS b) Trace Elements + Rare Earth Elements	1000	a) b)
7	a) Trace elements by ICP-ES+MS with aqua regia decomposition b) Trace elements by ICP-ES+MS with aqua regia decomposition on up to 30 gram samples c) Optional add-on Rare Earth Elements (REE) d) Optional add-on elements Pt and Pd e) Ultra-trace elements by ICP-ES+MS with aqua regia decomposition	2000 to 4000	a) b) c) d)
8	a) Trace elements by ICP-ES+MS with "near-total 4-acid decomposition" b) Trace elements + REEs by ICP-ES+MS with "near-total 4-acid decomposition" c) Ultra-trace elements by ICP-ES+MS with "near-total 4-acid decomposition" and optional REE add-on.	1000	a) b)
9	Lattice water (H <sub>2</sub> O+)	200	
10	Fluorine by Lithium borate fusion + ion specific electrode	1000	
11	Lead Collection Fire Assay with ICP-ES/MS for Au+Pt+Pd	200	
12	Total Organic Carbon	400	
13	Total Inorganic Carbon	400	
14	Total Graphitic Carbon	100	
15	CO <sub>2</sub> by Coulometry	100	
16	Sulphides by Infrared	200	
17	Major, minor and trace elements by ICP-ES+MS with sodium peroxide fusion	500	
<b>Package</b>	<b>Laboratory Preparation</b>		
18	a) Splitting of sediment samples b) Drying sediments at room temperature c) Sieving of air-dried sediments	500	
19	a) Crushing of rock samples at 75% for the 2mm mesh b) Splitting crushed sample	500	
20	Coarse crush and pulverize entire sample to better than 85% passing through 75 micron mesh. For samples up to 3 kg.	300	
21	Pulverization at 85% for the 75 micron mesh of sediments or crushed rocks: a) Using soft steel mill b) Using Cr-free hardened steel mill c) Using ceramic mill d) Using tungsten carbide mill e) Using agate mill f) Cleaning mill between samples with sand or glass	500	
22	a) Separation of the <0.002mm fraction by centrifugation	500	





	b) Maceration or milling of vegetation samples c) Ashing of vegetation samples		
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Package	STREAM 2 PACKAGE Neutron Activation Analysis	Estimated Number of Samples*	Offering (provide check-mark)
1	Multi-element package by neutron activation (NAA) on up to 30 gram samples	2000 to 3000	

Package	STREAM 3 PACKAGES Litho geochemistry of mineralized samples	Estimated Number of Sample*	Offering (provide check-mark)
1	Major elements using X-ray fluorescence (XRF) or ICP-AES. The element packages, minimal limit of detection (L.O.D.) and analytical methods are indicated on tables A and B.	800	
2	CO <sub>2</sub> by Infrared or Coulometry	800	
3	C-Organic by Infrared or Leco	100	
4	C-total and S-total by Infrared or Leco	300	
5	S-total by Infrared or Leco	500	
6	SO <sub>4</sub> by Infrared or Leco	200	
7	Au – Lead Collection Fire Assay - AA (30g sample)	800	
8	a) Trace level PGEs – Fire Assay ICP-MS b) Ultra-trace detection limits for same elements as 8a)	350	
9	Hg – Cold Vapor - AA	350	
10	Lithium borate fusion and ICP-MS (Zr, Y, Nb, Ba, Rb)	200	
11	Aqua Regia and ICP-MS (As, Bi, Se, Sb, Te)	700	
12	Lithium borate fusion and acid digestion for chalcophile elements and ICP-MS and –AES.	800	
13	FeO - Titration	800	
14	F – Lithium borate fusion and specific electrode	350	
15	Cl – INAA	350	
16	Fire Assay Nickel Sulphide Collection – ICP-MS	50	
17	Au – Cyanide Extraction – ICP-MS	25	
18	B - PGNA	50	
<b>ORE GRADE LEVELS – to be used when maximum L.O.D. is obtained for precious and base metals, and uranium content. Note: the options cannot be fractionated and the Offeror must provide a single price for each option indicated below that includes all elements of a specific option:</b>			
19	Au – Lead Collection Fire Assay - Gravimetric (30g sample)	200	
20	Au, Ag – Lead Collection Fire Assay - Gravimetric (30g sample)	200	
21	Au, Pt, Pd – Lead Collection Fire assay – ICP-MS (30g sample)	25	
22	Cu, Zn, Pb, Ni, – Aqua Regia – ICP-MS	150	
23	As, Cr – Sodium Peroxide Fusion – ICP-MS	150	
24	U <sub>3</sub> O <sub>8</sub> – Fusion XRF	20	
<b>Package</b>	<b>Laboratory Preparation</b>		
25	a) Splitting of sediment samples b) Drying sediments at room temperature c) Sieving of air-dried sediments	500	
26	a) Crushing of rock samples at 75% for the 2mm mesh b) Splitting crushed sample	500	



27	Coarse crush and pulverize entire sample to better than 85% passing through 75 micron mesh. For samples up to 3 kg.	300	
28	Pulverization at 85% for the 75 micron mesh of sediments or crushed rocks: a) Using soft steel mill b) Using Cr-free hardened steel mill c) Using ceramic mill d) Using tungsten carbide mill e) Using agate mill f) Cleaning mill between samples with sand or glass	500	
29	a) Separation of the <0.002mm fraction by centrifugation b) Maceration or milling of vegetation samples c) Ashing of vegetation samples	500	

Package	STREAM 4 PACKAGES Hydrogeochemical Packages	Estimated Number of Samples*	Offering (provide check-mark)
1	Conductivity, TDS and pH	500	
2	Alkalinity of water by titration	500	
3	Total Organic Carbon in water	500	
4	Dissolved Anions in water by Ion Chromatography	500	
5	Dissolved major elements by ICP-OES/ICP-AES	500	
6	Dissolved major and trace elements by ICP-MS	500	
7	Ultra-trace analysis of dissolved Au analysis of waters by ICP-MS	500	
<b>Package</b>	<b>Laboratory Preparation</b>		
8	Hydrogeochemical sample preparation: a) Acidification of samples for trace and major element analysis using 1% (sample volume) ultrapure 8N HNO <sub>3</sub> and refrigerated for two weeks b) DOC sample filtered to 0.45 µm c) Acidification of Au sample for ultra-trace analysis using aqua regia d) Chemical treatments for Au desorption from sample vessels (OPTIONAL)	500	

\* The estimated number of samples **per year** specified herein is only an approximation of requirements given in good faith. Some may not be required in any given year.

## SW6 Prioritizing of Samples

The Technical Authority must be notified of any samples that do not meet the minimum weight requirements for the analysis requested within 10 days of receiving the sample. Determinations that must be carried out on substandard sample size are to be undertaken at the discretion of the Technical Authority. In the case of multiple analyses involving destructive techniques, a priority listing of techniques will accompany the sample.

## SW7 Sample Shipping

The GSC will be responsible for shipping the samples for analysis to the Contractor from a GSC facility. The GSC will provide the samples in plastic vials (4, 16, 32 Drams), plastic bags or other containers, as appropriate. Prepared samples will be organized in numerical order within boxes and a manifest list of samples will be sent either as a hard copy with the samples or by email in an Excel worksheet format. GSC will also provide a list indicating the order that the samples must be analyzed in. Rock samples will be sent in plastic or metal pails and a manifest list of samples sent as a hard copy with the samples, or by email.



The Contractor will be responsible to return (at their cost) the excess materials in the containers and boxes used to send the samples to the contractor, where applicable, as a batch similar to the way they were received from the GSC. The samples must be returned to the following address unless otherwise specified by the GSC's Technical Authority after completion of the analyses:  
<to be inserted at time of contract award>

Return of the samples from the Contractor's storage facility may be required at any time. Under no circumstances is excess sample material to be discarded. The Contractor may be required to store the samples for up to two (2) months. For extra rock material large enough, the GSC sample number must be clearly labeled on the excess rock with permanent marker. For material too small to be marked directly, the GSC sample number must be clearly marked on the container the rock fragment(s) is stored in.

To help estimate shipping costs, the expected range of size and weight of the samples are as follows:

1. Samples prepared at GSC's Facilities: 10 to 50 grams of pulp is typically sent for analysis in vials 4 or 16 drams. Leftovers to be sent back to GSC weigh approximately 5 to 15 grams per sample in the same vial (approximately 2,500 – 7,500 samples per year).
2. Rock Samples: 1 to 3 kg samples are sent to the lab for preparation and analysis. Excess, pulps and rejects are to be sent back (approximately 1,000 samples per year).

## **SW8 Deliverables**

The Contractor will be required to supply data in the required time and format and to repeat all samples that do not fulfill quality control requirements, as set out in this document. The Contractor must provide data in accordance with the detection limits listed in Annex "A-1".

## **SW9 Quality Control of Analytical Data**

Each group of twenty (20) samples analyzed by the Contractor must contain a Reference Sample and a Duplicate Sample provided and inserted by the Contractor. Reference Samples must be chosen in accordance with sample matrix, range of concentration values. When available, Certified Reference Materials are preferred over in-house Reference Samples. The analytical report for each batch must include the analytical results for each Reference Sample and Duplicate Sample analyzed by the Contractor for every group of 20 samples.

In addition, quality control of analytical accuracy and precision may be monitored through the analysis of Blind Certified Reference Materials, and on Blind duplicate samples (inserted into batches by GSC).

The data produced by the Contractor for Referenced Samples chosen by the Contractor and Blind Reference Samples will be compared with their published certified values, or if not available, the "accepted" values derived from previous analyses by comparable methods. In order for the analyses of a given batch to be judged acceptable, the reported data for the Reference Samples relative to the "accepted" or "certified" data must fall within accuracy tolerances listed in Annex "A-1". The data produced by the Contractor for the Duplicate and Blind Duplicate Samples pairs will be compared. In order for the analyses of a given group to be acceptable, the data must fall within the precision tolerances stated in Annex "A-1". If analytical data for Reference Samples are not within prescribed tolerances for a given element(s), or if analytical errors are indicated by comparison of Duplicate Samples, the Contractor will be required to repeat all analyses for all elements in the group of 20 samples at no additional cost to the GSC.

## **SW10 Format and Delivery of Analytical Report**

The Contractor will provide to the GSC's Technical Authority, in digital format, an analytical report following the completion of each task authorization. The digital version will be provided by email to the Technical Authority and to the general Geochemistry e-mail account ([geochem-geochim@nrcan-mcan.gc.ca](mailto:geochem-geochim@nrcan-mcan.gc.ca)) in a consistent Microsoft Excel-compatible format.

The format defined by the Contractor will remain consistent throughout the period of the contract.



The analytical report for each batch must include the following information for each of the analytical procedures used:

- Sample decomposition method used
- Analytical instrumentation used (e.g. ICP-ES, ICP-MS)
- Final results of analyses and element symbol
- Date the analytical report was compiled
- Total number of samples processed and included in the report
- For each element, the Lower and Upper Detection Limits
- Units of measurement (ppm, ppb, %, ng/L, µg/L, mg/L, mV, µS)
- Samples size fraction analyzed where applicable or known
- Sample weight used for each analytical method, and if not fixed, the weight used for each analysis.

The manifest list provided by the GSC will include two columns for (a) Sample Identifier and (b) Processing Order. The analytical report should contain these two columns, with values that match exactly to those in the manifest list.

Additionally, it is preferable/desirable that the report contains a “Laboratory Order of Analysis” column, which is assigned to all samples, including the laboratory’s internal QA/QC standards. The “Laboratory Order of Analysis” column is assigned by the Laboratory and should be a simple integer, beginning at 1 for the first sample analysed and increasing by one for each sample analysed, including for the internal QA/QC samples.

A Certificate of Analysis with the analytical results for the samples submitted to the laboratory as well as the results of the laboratory’s internal QA/QC on those samples will be provided by the contractor in a PDF file.

It is requested that the analytical data also be reported in a single Microsoft Excel file containing three separate worksheets for the following:

- 1) metadata
- 2) analytical data
- 3) internal laboratory QA/QC

Ideally, the analytical data and internal laboratory QA/QC worksheets would include an initial header row that consists of unique column names assigned by the Laboratory for every column in the file. It may be followed by additional header rows that specify the method, the analyte, units and detection limit, for example. Ideally, the “Laboratory Order of Analysis” column would also appear on both the analytical data worksheet (2) and the internal laboratory QA/QC worksheet (3). See Annex F for an example of a data reporting template.

## **SW11 Sample Turnaround**

Prepared sample pulps will be submitted in batches of typically 20 to 200 samples. Turnaround time must be within four to six (4 – 6) weeks of receipt of the samples at the Contractor’s facility. Longer turnaround time may be acceptable; however, it must be agreed on by the GSC’s Technical Authority. Turnaround time will be as agreed to by the Technical Authority and the Contractor for batches larger than 200 samples at the start of each Task Authorization.

## **SW12 Confidentiality – Non-disclosure Agreement**

Natural Resources Canada (NRCan) is the sole owner of the analytical results, analyzed samples and powders. Any geological or geochemical information that may come to the knowledge of the Contractor, or its employees, must not be disclosed to a third party or made known by them to any third party, see Non-disclosure Agreement, Annex E.

## **SW13 Official Languages**

The work will be conducted in either of Canada’s official languages (English or French), at the choice of the Contractor.



## ANNEX “A-1” – STATEMENT OF REQUIREMENT

The GSC’s analytical requirements have been divided into four (4) Streams. Bidders must bid on at least one (1) Stream and must bid, at a minimum, on all the mandatory packages in each Stream, as follows:

**STREAM 1:** The Offeror must bid, at a minimum, on the mandatory packages 1-7d, 8a-b and 17.

**STREAM 2:** The Offeror must bid, at a minimum, on the mandatory Package 1.

**STREAM 3:** The Offeror must bid, at a minimum, on the mandatory packages 1 through to 24.

**STREAM 4:** The Offeror must bid, at a minimum, on the mandatory packages 1, 2, 4, 5, and 6

Detection limits are to be equal to or better than the ones listed below. No substitution of the Contractor’s analytical technique or instrumentation will be accepted and modifications to the Offeror’s existing methods during the course of the Standing Offer will be made upon approval from the GSC’s Technical Authority.

### MANDATORY ELEMENTS AND LOWER DETECTION LIMITS (DL)

#### STREAM 1 – MAJOR AND MINOR ELEMENT ANALYSIS

##### Package 1: Whole Rock Analysis: Major Elements

Can be carried out either by:

- a) Lithium borate fusion quenched in dilute acid followed by ICP-ES determination; OR
- b) Through X-ray fluorescence on fused disks.

Lower limits of detection must be equal to, or better than, those shown for the following *mandatory* elements:

Name	Symbol	Unit	Detection Limit
Silicon oxide	SiO <sub>2</sub>	%	0.10
Aluminum oxide	Al <sub>2</sub> O <sub>3</sub>	%	0.03
Iron oxide	Fe <sub>2</sub> O <sub>3</sub>	%	0.04
Calcium oxide	CaO	%	0.01
Magnesium oxide	MgO	%	0.01
Sodium oxide	Na <sub>2</sub> O	%	0.01
Potassium oxide	K <sub>2</sub> O	%	0.04
Manganese oxide	MnO	%	0.01
Titanium oxide	Ti <sub>2</sub> O	%	0.01
Phosphorus oxide	P <sub>2</sub> O <sub>5</sub>	%	0.01

If Chromium oxide (Cr<sub>2</sub>O<sub>3</sub>) and any trace elements are included in a Bidder’s routine Whole Rock Major Element analysis packages, these results must be reported.

If the Bidder has more than one Whole Rock Major Element package that meets the mandatory specifications (e.g. fused disk/XRF and fusion/ICP-ES), then both packages must be quoted.

**Package 2:** Loss-on-ignition @ 500°C by gravimetry, DL of 0.1% or better.

**Package 3:** Loss-on-ignition @ 1000°C by gravimetry, DL of 0.1% or better.

**Package 4:** Determination of volatiles, S and C, by combustion/IR absorption, DL = 0.02%

Name	Symbol	Unit	Detection Limit
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Carbon Total	C	%	0.01
Sulfur Total	S	%	0.01

**Package 5:** FeO by Titration, DL = 0.02%

**Package 6:** Whole Rock Analysis: Trace Elements (6a), Trace Elements + Rare Earth Elements (6b)

Normally done by lithium borate fusion quenched in diluted acid followed by ICP-ES and ICP-MS analysis. Lower limits of detection must be equal to, or better than, those shown for the following *mandatory* elements:

**(6a) Trace elements.** Mandatory elements and detection limits:

Element	Symbol	Unit	Detection Limit
Barium	Ba	ppm	10
Cobalt	Co	ppm	1
Cesium	Cs	ppm	0.5
Gallium	Ga	ppm	1
Hafnium	Hf	ppm	1
Niobium	Nb	ppm	1
Nickel	Ki	ppm	20
Rubidium	Rb	ppm	1
Tin	Sn	ppm	1
Strontium	Sr	ppm	2
Tantalum	Ta	ppm	0.5
Thorium	Th	ppm	0.2
Uranium	U	ppm	0.1
Vanadium	V	ppm	8
Tungsten	W	ppm	1
Yttrium	Y	ppm	1
Zirconium	Zr	ppm	2

Data for the following elements must also be provided if those elements are part of the Bidder's standard Trace Element Analysis package:

Element	Symbol	Element	Symbol
Silver	Ag	Mercury	Hg
Gold	Au	Indium	In
Arsenic	As	Molybdenum	Mo
Beryllium	Be	Lead	Pb
Bismuth	Bi	Antimony	Sb
Cadmium	Cd	Scandium	Sc
Chromium	Cr	Titanium	Ti
Copper	Cu	Thallium	Tl
Germanium	Ge	Zinc	Zn

If the Bidder has more than one (1) Whole Rock Trace Element package that meets the mandatory specifications (e.g. lithium borate fusion and sodium peroxide fusion, or, ICP-ES/ICP-MS and ICP-MS only options), then all qualifying packages must be quoted.

**(6b) Trace Elements + REE.** Elements (and detection limits) of 6a plus REE. For the REE, lower limits of detection must be equal to, or better than, those shown for the following *mandatory* elements:



Element	Symbol	Unit	Detection Limit
Cerium	Ce	ppm	0.5
Dysprosium	Dy	ppm	0.1
Erbium	Er	ppm	0.1
Europium	Eu	ppm	0.05
Gadolinium	Gd	ppm	0.1
Holmium	Ho	ppm	0.1
Lanthanum	La	ppm	0.5
Lutetium	Lu	ppm	0.05
Neodymium	Nd	ppm	0.3
Praseodymium	Pr	ppm	0.05
Samarium	Sm	ppm	0.1
Terbium	Tb	ppm	0.1
Thulium	Tm	ppm	0.05
Ytterbium	Yb	ppm	0.1

**Package 7: Trace elements with Aqua-Regia decomposition and ICP-ES + ICP-MS**

**7a:** Lower limits of detection must be equal to, or better than, those shown for the following *mandatory* elements:

Element	Symbol	Unit	Detection Limit
Silver	Ag	ppm	0.01
Aluminum	Al	wt%	0.01
Arsenic	As	ppm	1
Barium	Ba	ppm	10
Beryllium	Be	ppm	0.1
Bismuth	Bi	ppm	0.02
Calcium	Ca	wt%	0.01
Cadmium	Cd	ppm	0.01
Cerium	Ce	ppm	0.1
Cobalt	Co	ppm	0.1
Chromium	Cr	ppm	1
Cesium	Cs	ppm	0.05
Copper	Cu	ppm	0.5
Iron	Fe	wt%	0.01
Gallium	Ga	ppm	0.1
Germanium	Ge	ppm	0.1
Hafnium	Hf	ppm	0.1
Indium	In	ppm	0.02
Mercury	Hg	ppm	0.01
Potassium	K	wt%	0.01
Lanthanum	La	ppm	0.5
Lithium	Li	ppm	1
Magnesium	Mg	wt%	0.01
Manganese	Mn	ppm	5
Molybdenum	Mo	ppm	0.05
Sodium	Na	wt%	0.01
Niobium	Nb	ppm	0.1
Nickel	Ni	ppm	0.5



Element	Symbol	Unit	Detection Limit
Phosphorus	P	wt%	0.01
Lead	Pb	ppm	0.2
Rubidium	Rb	ppm	0.2
Sulphur	S	wt%	0.02
Antimony	Sb	ppm	0.05
Scandium	Sc	ppm	0.1
Selenium	Se	ppm	1
Tin	Sn	ppm	0.3
Strontium	Sr	ppm	0.5
Tantalum	Ta	ppm	0.05
Tellurium	Te	ppm	0.05
Thorium	Th	ppm	0.1
Titanium	Ti	wt%	0.01
Thallium	Tl	ppm	0.02
Uranium	U	ppm	0.1
Vanadium	V	ppm	1
Tungsten	W	ppm	0.1
Yttrium	Y	ppm	0.05
Zinc	Zn	ppm	2
Zirconium	Zr	ppm	0.5

Data for the following elements must also be provided if those elements are part of the Contractor's standard Aqua-Regia Trace Element analysis package:

Element	Symbol	Element	Symbol
Gold	Au	Palladium	Pd
Boron	B	Praseodymium	Pr
Dysprosium	Dy	Platinum	Pt
Erbium	Er	Rhenium	Re
Europium	Eu	Samarium	Sm
Gadolinium	Gd	Terbium	Tb
Lutetium	Lu	Thulium	Tm
Neodymium	Nd	Ytterbium	Tb

The package may also include Mercury (Hg) by Cold-Vapour Atomic Absorption as an option.

**7b:** Same mandatory and additional elements and detection limits of package 7a on large (up to 30g) samples.

**7c:** Optional add-on elements REEs

**7d:** Optional add-on elements Pt and Pd

**7e:** Ultra-trace detection limits for the same mandatory and additional elements of package 7a.

**Package 8a:** Trace elements by 4-acid digestion and ICP-ES+ICP-MS

Lower limits of detection must be equal to, or better than, those shown for the following *mandatory* elements:

Element	Symbol	Unit	Detection Limit
Silver	Ag	ppm	0.1
Aluminum	Al	wt%	0.01





Element	Symbol	Unit	Detection Limit
Silver	Ag	ppm	0.1
Arsenic	As	ppm	1
Barium	Ba	ppm	10
Beryllium	Be	ppm	1
Bismuth	Bi	ppm	0.1
Calcium	Ca	wt%	0.01
Cadmium	Cd	ppm	0.1
Cerium	Ce	ppm	1
Cobalt	Co	ppm	0.2
Chromium	Cr	ppm	1
Copper	Cu	ppm	0.5
Iron	Fe	wt%	0.01
Hafnium	Hf	ppm	0.1
Indium	In	ppm	0.1
Potassium	K	wt%	0.01
Lanthanum	La	ppm	0.5
Lithium	Li	ppm	1
Magnesium	Mg	wt%	0.01
Manganese	Mn	ppm	5
Molybdenum	Mo	ppm	0.1
Sodium	Na	wt%	0.1
Niobium	Nb	ppm	0.1
Nickel	Ni	ppm	1.0
Phosphorous	P	wt%	0.01
Lead	Pb	ppm	0.5
Rubidium	Rb	ppm	0.2
Sulphur	S	wt%	0.1
Antimony	Sb	ppm	0.1
Scandium	Sc	ppm	1
Selenium	Se	ppm	2
Tin	Sn	ppm	1
Strontium	Sr	ppm	1
Tantalum	Ta	ppm	0.1
Tellurium	Te	ppm	0.5
Thorium	Th	ppm	0.2
Titanium	Ti	wt%	0.01
Thallium	Tl	ppm	0.5
Uranium	U	ppm	0.1
Vanadium	V	ppm	4
Tungsten	W	ppm	0.1
Yttrium	Y	ppm	0.1
Zinc	Zn	ppm	2
Zirconium	Zr	ppm	1

Data for the following elements must also be provided if those elements are part of the Bidders standard 4-acid digestion Trace Element package:

Element	Symbol	Element	Symbol
Cesium	Cs	Germanium	Ge
Gallium	Ga	Rhenium	Re



**Package 8b: Trace elements + REEs by 4-acid digestion and ICP-ES+ICP-MS**

- Elements and detection limits as per Package 8a, plus
- REEs that are not included in Package 8a (Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu) with *mandatory* detection limits of 0.1 ppm or better.

**Package 8c: Ultra-trace detection limits for the same elements listed in package 8a.**

**Package 9: Lattice Water, (H<sub>2</sub>O+), by gravimetry or combustion/infrared, DL = 0.1%.**

**Package 10: Fluorine by lithium borate fusion and specific electrode, DL of 10 ppm or better.**

**Package 11: Lead Collection Fire Assay with ICP-MS or ICP-ES (Au+Pt+Pd)**

The following mandatory elements and detection limits, to be determined on 30g samples, are as follows:

Element	Symbol	Unit	Detection Limit
Gold	Au	ppb	2
Platinum	Pt	ppb	3
Palladium	Pd	ppb	2

If the Bidder has more than one (1) package that meets these mandatory specifications (e.g ICP-ES/ICP-MS and ICP-MS only options), then all packages should be quoted.

**Package 12: Total Organic Carbon by Infrared or Leco, DL of 0.05% or better**

**Package 13: Total Inorganic Carbon, DL of 0.05% or better**

**Package 14: Total Graphitic Carbon, DL of 0.05% or better**

**Package 15: CO<sub>2</sub> by Coulometry, DL of 0.05% or better**

**Package 16: Sulphides by Infrared, DL of 0.05% or better**

**Package 17: Major, minor and trace elements by ICP-ES+MS with sodium peroxide fusion**

Element	Symbol	Unit	Detection Limit
Aluminum	Al	wt%	0.01
Arsenic	As	ppm	5
Barium	Ba	ppm	10
Beryllium	Be	ppm	5
Bismuth	Bi	ppm	2
Calcium	Ca	wt%	0.1
Cadmium	Cd	ppm	2
Cerium	Ce	ppm	0.8
Cobalt	Co	ppm	0.5
Chromium	Cr	ppm	30
Cesium	Cs	Ppm	0.1
Copper	Cu	ppm	20
Dysprosium	Dy	ppm	0.3



Element	Symbol	Unit	Detection Limit
Erbium	Er	ppm	0.1
Europium	Eu	ppm	0.1
Iron	Fe	wt%	0.05
Gallium	Ga	ppm	1
Gadolinium	Gd	ppm	0.1
Germanium	Ge	ppm	1
Holmium	Ho	ppm	0.2
Indium	In	ppm	0.3
Potassium	K	wt%	0.1
Lanthanum	La	ppm	0.4
Lithium	Li	ppm	10
Magnesium	Mg	wt%	0.01
Manganese	Mn	ppm	10
Molybdenum	Mo	ppm	2
Niobium	Nb	ppm	2.4
Neodymium	Nd	ppm	0.7
Nickel	Ni	ppm	10
Praseodymium	Pr	ppm	0.1
Rubidium	Rb	ppm	2
Antimony	Sb	ppm	2
Samarium	Sm	ppm	0.1
Tin	Sn	ppm	3
Strontium	Sr	ppm	20
Tantalum	Ta	ppm	0.5
Terbium	Tb	ppm	0.1
Thorium	Th	ppm	0.1
Titanium	Ti	wt%	0.01
Thallium	Tl	ppm	0.5
Thulium	Tm	ppm	0.1
Uranium	U	ppm	0.2
Vanadium	V	ppm	10
Tungsten	W	ppm	5
Yttrium	Y	ppm	0.5
Ytterbium	Yb	ppm	0.1
Zinc	Zn	ppm	25

Data for the following elements must also be provided if those elements are part of the Contractor's standard Sodium Peroxide Fusion analysis package:

Element	Symbol	Element	Symbol
Silver	Ag	Rhenium	Re
Boron	B	Sulphur	S
Hafnium	Hf	Scandium	Sc
Lutetium	Lu	Selenium	Se
Phosphorus	P	Silicon	Si
Lead	Pb	Tellurium	Te

#### LABORATORY PREPARATION:

Package 18: Sediment Sample Preparation



#### **18a) Sample Splitting**

- Air dry sample
- Set aside ~1kg split prior to preparation of sample for geochemical analysis. Splitting method must be identified.
- Ship untouched split directly to GSC facility identified.

#### **18b) Dry Sediment at Room Temperature**

- Air dry sample at <40°C
- Disaggregate sample in agate (not porcelain) mortar & pestle or inside unused plastic sample bag using rubber mallet, using a new bag for each sample.

#### **18c) Sieving of Dried Sediments to <0.063 mm (or other specified size fraction)**

- Dry sieve 2 kg sample split to completion, to avoid the artificial concentration of gold in sample.
- Use stainless steel sieves with epoxy (not solder).
- Dry sieve into stainless steel pan, not onto paper or plastic sheet.
- Pour sieved fraction into sample envelope or vial.
- Sieve and pan are to be cleaned with brush and air hose between each sample.
- Pan to be wiped clean with distilled water between each sample.
- Sieve to be cleaned with ultrasonic cleaner prior to sieving the first sample in the batch, **and** at end of every day.

#### **Package 19: Crushing and Splitting of Rock Samples**

**19a)** Crush approximately 1kg sample to 70% or better passing 10 mesh (2mm).

**19b)** Split off 250grams of crushed material using a riffle splitter for geochemical analysis.

#### **Package 20: Crushing and Splitting of Rock Samples up to 3 kg.**

Coarse crush and pulverize entire sample to better than 85% passing through 75 micron mesh. For samples up to 3 kg.

#### **Package 21: Pulverization of Sediments or Crushed Rocks**

**21a)** Pulverization of sediments or crushed rocks using soft steel to 85% passing 200 mesh (75 microns)

**21b)** Pulverization of sediments or crushed rocks using hardened steel to 85% or better passing 200 mesh (75 microns)

**21c)** Pulverization of sediments or crushed rocks using ceramic to 85% or better passing 200 mesh (75 microns)

**21d)** Pulverization of sediments or crushed rocks using tungsten carbide to 85% or better passing 200 mesh (75 microns)

**21e)** Pulverization of sediments or crushed rocks using agate to 85% or better passing 200 mesh (75 microns)

**21f)** Clean pulverizing equipment with sand or glass prior to starting the batch and between each sample

If combining one **19a** and **19b**, with one of **21a-21e** and **21f** (if available) results in a better package price than the sum of the individual prices, this must be specified.

#### **Package 22: Miscellaneous Sample Preparation**

**22a)** Separation of clay fraction (<0.002 mm) by centrifugation



- Use centrifuge to separate the <0.002 mm fraction following the procedures outlined in Geological Survey of Canada Open File 4823.
- Centrifuge bottles and decanting equipment must be rinsed and cleaned with distilled water between each sample.

## 22b) Maceration or milling of vegetation samples

Maceration:

- Air or oven dry (60°C or less) plant material
- Mill dried material in either a Wiley mill or a Retsch mill
- Sieve material to completion using 1 mm stainless steel mesh screen with epoxy (not solder)
- Sieve into stainless steel pan, not onto paper or plastic sheet
- Pour sieved fraction into sample envelope or vial
- Sieve and pan are to be cleaned with brush and air hose between each sample
- Pan to be wiped clean with distilled water between each sample
- Sieve to be cleaned with ultrasonic cleaner prior to sieving the first sample in the batch, **and** at end of every day

## 22c) Ashing of vegetation samples

- Ash vegetation sample at 475°C for a minimum of 4 hours.

## STREAM 2 – MULTI-ELEMENT PACKAGE BY NEUTRON ACTIVATION ANALYSIS (NAA)

### Package 1: NAA on 30- to 40- gram samples

The Contractor must conduct NAA on a minimum of a 30- to 40- gram sample. The Contractor must determine the weight of each sample, in grams, to two (2) decimal places. The weight of each sample must be reported within the analytical report. The Contractor must report to the GSC's Technical Authority any samples that weigh less than 30 grams. Analyses of samples weighing less than 30 grams are to be undertaken at the discretion of the Technical Authority.

Lower limits of detection must be equal to, or better than, those shown for the following *mandatory* elements:

Element	Symbol	Unit	Detection Limit
Antimony	Sb	ppm	0.1
Arsenic	As	ppm	1
Barium	Ba	ppm	50
Bromine	Br	ppm	0.5
Cadmium	Cd	ppm	5
Cerium	Ce	ppm	5
Cesium	Cs	ppm	0.5
Chromium	Cr	ppm	20
Cobalt	Co	ppm	5
Europium	Eu	ppm	1
Gold	Au	ppb	2
Hafnium	Hf	ppm	1
Iridium	Ir	ppb	50
Iron	Fe	wt%	0.2
Lanthanum	La	ppm	2
Lutetium	Lu	ppm	0.2
Molybdenum	Mo	ppm	2
Nickel	Ni	ppm	50



Element	Symbol	Unit	Detection Limit
Rubidium	Rb	ppm	10
Samarium	Sm	ppm	0.1
Scandium	Sc	ppm	5
Selenium	Se	ppm	5
Silver	Ag	ppm	2
Sodium	Na	wt%	0.02
Tantalum	Ta	ppm	0.5
Tellurium	Te	ppm	10
Terbium	Tb	ppm	0.5
Thorium	Th	ppm	0.2
Tin	Sn	ppm	100
Titanium	Ti	ppm	500
Tungsten	W	ppm	1
Uranium	U	ppm	0.2
Ytterbium	Yb	ppm	2
Zinc	Zn	ppm	100
Zirconium	Zr	ppm	200

If the Bidder has more than one (1) routine Multi-Element by NAA package that meets these mandatory specifications (e.g. “exploration” and “research” packages), then all qualifying packages must be quoted.

### STREAM 3 – LITHOGEOCHEMISTRY OF MINERALIZED SAMPLES

**Package 1:** The samples must be analyzed for major elements using X-ray fluorescence (XRF) or ICP-AES. The element packages, minimal limit of detection (L.O.D.) and analytical methods are indicated on tables A and B.

**Table A: XRF analyses on fused disks**

Name	Symbol	Unit	Detection Limit
Silicon oxide	SiO <sub>2</sub>	%	0.01
Aluminum oxide	Al <sub>2</sub> O <sub>3</sub>	%	0.01
Iron oxide	Fe <sub>2</sub> O <sub>3</sub>	%	0.01
Calcium oxide	CaO	%	0.01
Magnesium oxide	MgO	%	0.01
Chromium oxide	Cr <sub>2</sub> O <sub>3</sub>	%	0.01
Sodium oxide	Na <sub>2</sub> O	%	0.02
Potassium oxide	K <sub>2</sub> O	%	0.01
Manganese oxide	MnO	%	0.01
Titanium oxide	Ti <sub>2</sub> O	%	0.01
Phosphorus oxide	P <sub>2</sub> O <sub>5</sub>	%	0.01
Vanadium Oxide	V <sub>2</sub> O <sub>5</sub>	%	0.01
Loss on Ignition	LOI	%	0.01

**Table B: ICP-AES analyses Lithium meta/tetraborate fusion**

Name	Symbol	Unit	Detection Limit
Silicon oxide	SiO <sub>2</sub>	%	0.01
Aluminum oxide	Al <sub>2</sub> O <sub>3</sub>	%	0.01
Iron oxide	Fe <sub>2</sub> O <sub>3</sub>	%	0.01
Calcium oxide	CaO	%	0.01



Magnesium oxide	MgO	%	0.01
Potassium oxide	K <sub>2</sub> O	%	0.01
Manganese oxide	MnO	%	0.001
Titanium oxide	Ti <sub>2</sub> O	%	0.001
Phosphorus oxide	P <sub>2</sub> O <sub>5</sub>	%	0.01
Sodium oxide	Na <sub>2</sub> O	%	0.02
Loss on Ignition	LOI	%	0.01

- Package 2:** CO<sub>2</sub> by Infrared or Coulometry, DL of 0.05% or better
- Package 3:** C-Organic by Infrared or Leco, DL of 0.05% or better
- Package 4:** C-total and S-total by Infrared or Leco, DL of 0.05% or better
- Package 5:** S-total by Infrared or Leco, DL of 0.05% or better
- Package 6:** SO<sub>4</sub> by Infrared or Leco, DL of 0.05% or better
- Package 7:** Au – Lead Collection Fire Assay - AA (30g sample), DL of 5ppb or better
- Package 8a):** Trace Level PGE's – Fire Assay ICP-MS

Name	Symbol	Unit	Detection Limit
Gold	Au	ppb	2
Platinum	Pt	ppb	0.5
Palladium	Pd	ppb	0.5

- Package 8b):** Ultra-trace detection limits for the same elements listed in package 8a (30g sample).
- Package 9:** Hg by Cold Vapor – AA, DL of 5ppb or better
- Package 10:** Lithium borate fusion and ICP-MS (Zr, Y, Nb, Ba, Rb)

Name	Symbol	Unit	Detection Limit
Zirconium	Zr	ppm	0.5
Yttrium	Y	ppm	0.5
Niobium	Nb	ppm	1
Barium	Ba	ppm	0.5
Rubidium	Rb	ppm	0.2

- Package 11:** Aqua Regia and ICP-MS (As, Bi, Se, Sb, Te)

Name	Symbol	Unit	Detection Limit
Arsenic	As	ppm	0.1
Bismuth	Bi	ppm	0.1
Selenium	Se	ppm	0.1
Antimony	Sb	ppm	0.1
Tellurium	Te	ppm	0.1

- Package 12:** Lithium borate fusion and four acid digestion for chalcophile elements and ICP-MS and –AES. (46 trace elements)

Name	Symbol	Unit	Detection Limit
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Silver	Ag	ppm	1
Boron	B	ppm	1
Barium	Ba	ppm	0.5
Beryllium	Be	ppm	0.5
Cadmium	Cd	ppm	0.2
Cerium	Ce	ppm	0.1
Cobalt	Co	ppm	0.5
Chromium	Cr	ppm	1
Cesium	Cs	ppm	0.1
Copper	Cu	ppm	0.5
Dysprosium	Dy	ppm	0.05
Erbium	Er	ppm	0.05
Europium	Eu	ppm	0.05
Gallium	Ga	ppm	1
Gadolinium	Gd	ppm	0.05
Germanium	Ge	ppm	1
Hafnium	Hf	ppm	1
Holmium	Ho	ppm	0.05
Indium	In	ppm	0.2
Lanthanum	La	ppm	0.1
Lithium	Li	ppm	1
Lutetium	Lu	ppm	0.05
Manganese	Mn	ppm	2
Molybdenum	Mo	ppm	1
Niobium	Nb	ppm	1
Neodymium	Nd	ppm	0.1
Nickel	Ni	ppm	1
Lead	Pb	ppm	2
Praseodymium	Pr	ppm	0.05
Rubidium	Rb	ppm	0.2
Scandium	Sc	ppm	0.5
Samarium	Sm	ppm	0.1
Tin	Sn	ppm	1
Strontium	Sr	ppm	0.1
Tantalum	Ta	ppm	0.5
Terbium	Tb	ppm	0.05
Thorium	Th	ppm	0.1
Thallium	Tl	ppm	0.5
Thulium	Tm	ppm	0.05
Uranium	U	ppm	0.05
Vanadium	V	ppm	2
Tungsten	W	ppm	1
Yttrium	Y	ppm	0.5
Ytterbium	Yb	ppm	0.1
Zinc	Zn	ppm	0.5
Zirconium	Zr	ppm	0.5

**Package 13:** FeO by Titration, DL of 0.1% or better

**Package 14:** F by Lithium borate fusion and specific electrode, DL of 0.01% or better





**Package 15:** Cl by INAA, DL of 0.01% or better

**Package 16:** Fire Assay Nickel Sulphide Collection – ICP-MS

Name	Symbol	Unit	Detection Limit
Platinum	Pt	ppb	1
Palladium	Pd	ppb	1
Iridium	Ir	ppb	1
Rhodium	Rh	ppb	1
Ruthenium	Ru	ppb	1
Gold	Au	ppb	1

**Package 17:** Au – Cyanide Extraction – ICP-MS (30g sample)

Name	Symbol	Unit	Detection Limit
Gold	Au	ppb	0.05

**Package 18:** Boron - PGNA

Name	Symbol	Unit	Detection Limit
Boron	B	ppm	1

**ORE GRADE LEVELS – to be used when maximum L.O.D. is obtained for precious and base metals, and uranium content. Note: the packages cannot be fractionated and the Offeror must provide a single price for each package indicated below that includes all elements of a specific package:**

**Package 19:** Au by Lead collection Fire Assay - Gravimetric (30g sample), DL of 3 g/t

**Package 20:** Au, Ag - Lead collection Fire Assay - Gravimetric (30g sample)

Name	Symbol	Unit	Detection Limit
Gold	Au	g/t	3
Silver	Ag	g/t	5

**Package 21:** Au, Pt, Pd – Lead collection Fire assay – ICP-MS (30g sample)

Name	Symbol	Unit	Detection Limit
Gold	Au	ppm	2
Platinum	Pt	ppm	2
Palladium	Pd	ppm	2

**Package 22:** Cu, Zn, Pb, Ni, – Aqua Regia – ICP-MS

Name	Symbol	Unit	Detection Limit
Copper	Cu	%	0.01
Zinc	Zn	%	0.01
Lead	Pb	%	0.01
Nickel	Zn	%	0.01

**Package 23:** As, Cr – Sodium Peroxide Fusion – ICP-MS

Name	Symbol	Unit	Detection Limit
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Arsenic	As	%	0.01
Chromium	Cr	%	0.01

**Package 24:** U<sub>3</sub>O<sub>8</sub> – Fusion XRF, DL of 1% or better

**LABORATORY PREPARATION:**

**Package 25: Sediment Samples**

**25a) Sample Splitting**

- Air dry sample
- Set aside ~1kg split prior to preparation of sample for geochemical analysis. Splitting method must be identified.
- Ship untouched split directly to GSC facility identified.

**25b) Dry Sediment at Room Temperature**

- Air dry sample at <40°C
- Disaggregate sample in agate (not porcelain) mortar & pestle or inside unused plastic sample bag using rubber mallet, using a new bag for each sample.

**25c) Sieving of Dried Sediments to <0.063 mm (or other specified size fraction)**

- Dry sieve 2 kg sample split to completion, to avoid the artificial concentration of gold in sample.
- Use stainless steel sieves with epoxy (not solder).
- Dry sieve into stainless steel pan, not onto paper or plastic sheet.
- Pour sieved fraction into sample envelope or vial.
- Sieve and pan are to be cleaned with brush and air hose between each sample.
- Pan to be wiped clean with distilled water between each sample.
- Sieve to be cleaned with ultrasonic cleaner prior to sieving the first sample in the batch, **and** at end of every day.

**Package 26: Crushing and Splitting of Rock Samples**

**26a)** Crush approximately 1kg sample to 70% or better passing 10 mesh (2mm).

**26b)** Split off 250 grams of crushed material using a riffle splitter for geochemical analysis.

**Package 27: Crushing and Splitting of Rock Samples up to 3 kg.**

Coarse crush and pulverize entire sample to better than 85% passing through 75 micron mesh. For samples up to 3 kg.

**Package 28: Pulverization of Sediments or Crushed Rocks**

**28a)** Pulverization of sediments or crushed rocks using soft steel to 85% passing 200 mesh (75 microns)

**28b)** Pulverization of sediments or crushed rocks using hardened steel to 85% or better passing 200 mesh (75 microns)

**28c)** Pulverization of sediments or crushed rocks using ceramic to 85% or better passing 200 mesh (75 microns)

**28d)** Pulverization of sediments or crushed rocks using tungsten carbide to 85% or better passing 200 mesh (75 microns)

**28e)** Pulverization of sediments or crushed rocks using agate to 85% or better passing 200 mesh (75 microns)

**28f)** Clean pulverizing equipment with sand or glass prior to starting the batch and between each sample.



If combining one **26a** and **26b**, with one of **28a-28e** and **28f** (if available) results in a better package price than the sum of the individual prices, this must be specified.

**Package 29: Miscellaneous Sample Preparation**

**29a) Separation of clay fraction (<0.002 mm) by centrifugation**

- Use centrifuge to separate the <0.002 mm fraction following the procedures outlined in Geological Survey of Canada Open File 4823.
- Centrifuge bottles and decanting equipment must be rinsed and cleaned with distilled water between each sample.

**29b) Maceration or milling of vegetation samples**

Maceration:

- Air or oven dry (60°C or less) plant material
- Mill dried material in either a Wiley mill or a Retsch mill
- Sieve material to completion using 1 mm stainless steel mesh screen with epoxy (not solder)
- Sieve into stainless steel pan, not onto paper or plastic sheet
- Pour sieved fraction into sample envelope or vial
- Sieve and pan are to be cleaned with brush and air hose between each sample
- Pan to be wiped clean with distilled water between each sample
- Sieve to be cleaned with ultrasonic cleaner prior to sieving the first sample in the batch, **and** at end of every day

**29c) Ashing of vegetation samples**

- Ash vegetation sample at 475°C for a minimum of 4 hours.

**STREAM 4 – HYDROGEOCHEMICAL PACKAGES**

**Package 1:** Physicochemical parameters (pH, Conductivity, TDS)

**Package 2:** Alkalinity by Titration

Parameter	Symbol	Unit	Detection Limit
Alkalinity	CaCO <sub>3</sub>	mg/L	3

**Package 3:** Dissolved Organic Carbon

**Package 4:** Dissolved Anion (Ion-chromatography)

Name	Symbol	Unit	Detection Limit
Bromide	Br	mg/L	0.5
Chlorine	Cl	mg/L	1
Fluoride	F	mg/L	0.5
Nitrate	NO <sub>3</sub>	mg/L	0.25
Phosphate	PO <sub>4</sub>	mg/L	0.25
Sulfate	SO <sub>4</sub>	mg/L	1



**Package 5:** Dissolved major elements (ICP-AES/ICP-OES/ICP-MS)

Name	Symbol	Unit	Detection Limit
Calcium	Ca	mg/L	0.5
Potassium	K	mg/L	0.5
Magnesium	Mg	mg/L	0.5
Sodium	Na	mg/L	0.5

**Package 6:** Dissolved trace elements (ICP-MS)

Name	Symbol	Unit	Detection Limit
Silver	Ag	µg/L	0.1
Aluminum	Al	µg/L	5
Arsenic	As	µg/L	1
Boron	B	µg/L	10
Barium	Ba	µg/L	0.25
Beryllium	Be	µg/L	0.2
Bismuth	Bi	µg/L	0.1
Cadmium	Cd	µg/L	0.1
Cerium	Ce	µg/L	0.05
Cobalt	Co	µg/L	0.2
Chromium	Cr	µg/L	1
Cesium	Cs	µg/L	0.05
Copper	Cu	µg/L	0.2
Dysprosium	Dy	µg/L	0.2
Erbium	Er	µg/L	0.05
Europium	Eu	µg/L	0.05
Iron	Fe	mg/L	10
Gallium	Ga	µg/L	0.1
Gadolinium	Gd	µg/L	0.05
Germanium	Ge	µg/L	0.1
Hafnium	Hf	µg/L	0.05
Holmium	Ho	µg/L	0.1
Indium	In	µg/L	0.05
Lanthanum	La	µg/L	0.1
Lithium	Li	µg/L	0.2
Lutetium	Lu	µg/L	0.1
Manganese	Mn	µg/L	0.2
Molybdenum	Mo	µg/L	2
Niobium	Nb	µg/L	0.05
Neodymium	Nd	µg/L	0.25
Nickel	Ni	µg/L	0.25
Lead	Pb	µg/L	0.5
Praseodymium	Pr	µg/L	0.05
Rubidium	Rb	µg/L	0.2
Rhenium	Re	µg/L	0.05
Antimony	Sb	µg/L	0.2
Scandium	Sc	µg/L	1
Selenium	Se	µg/L	5
Silica	Si	mg/L	0.04
Samarium	Sm	µg/L	0.05



Tin	Sn	µg/L	0.1
Strontium	Sr	µg/L	0.5
Tantalum	Ta	µg/L	0.05
Terbium	Tb	µg/L	0.05
Tellurium	Te	µg/L	0.2
Titanium	Ti	µg/L	10
Thorium	Th	µg/L	0.5
Thallium	Tl	µg/L	0.05
Thulium	Tm	µg/L	0.05
Uranium	U	µg/L	0.05
Vanadium	V	µg/L	1
Tungsten	W	µg/L	0.05
Yttrium	Y	µg/L	0.05
Ytterbium	Yb	µg/L	0.05
Zinc	Zn	µg/L	1
Zirconium	Zr	µg/L	0.2

**Package 7:** Ultra-trace analysis of dissolved Au

Element	Symbol	Unit	Detection Limit
Gold	Au	µg/L	0.1

**LABORATORY PREPARATION:**

**Package 8:** Water sample preparation

**8a)** Acidification of samples for trace and major element analysis using 1% (sample volume) ultrapure 8N HNO<sub>3</sub> and refrigerated for two weeks

**8b)** DOC sample filtered to 0.45 µm

**8c)** Acidification of Au sample for ultra-trace analysis using aqua regia

**8d)** Chemical treatments for Au desorption from sample vessels (OPTIONAL)



## ANNEX “A-2” – PRECISION AND ACCURACY TOLERANCES

### Precision:

The relative difference between duplicate analyses in each block of 20 samples must be as follows for at least 90% of the elements reported.

Concentration	Tolerance Level
DL	100%
10 x DL	50%
100 x DL	20%
1000 x DL	10%

### Accuracy:

The relative difference between the reported data for Reference Samples relative to the “accepted” or “certified” must be as follows for at least 90% of the elements reported.

Concentration	Tolerance Level
DL	±100%
10 x DL	±50%
100 x DL	±20%
1000 x DL	±10%



## **ANNEX B – BASIS OF PAYMENT**

*(to be completed at SO award)*



## **ANNEX C – QUATERLY STANDING USAGE REPORT**

To be included at the issuance of Standing Offer





## ANNEX D – VENDOR PERFORMANCE

Call-up Number: \_\_\_\_\_

Details of Requirement: \_\_\_\_\_

Date: \_\_\_\_\_

	Strongly Disagree (40%)	Disagree (60%)	Agree (80%)	Strongly Agree (100%)
Precision and accuracy of the data was satisfactory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The sample reproduction required no do-overs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data quality issues, if any, were solved promptly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The SO Holder delivered on schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Any other comments?

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## ANNEX E – NON-DISCLOSURE AGREEMENT

I, \_\_\_\_\_, recognize that in the course of my work as an employee of \_\_\_\_\_, I may be given access to information by or on behalf of Canada in connection with the Work, pursuant to **Standing Offer Number** \_\_\_\_\_ between Her Majesty the Queen in right of Canada, represented by the Minister of Natural Resources Canada and \_\_\_\_\_, including any information that is confidential or proprietary to third parties, and information conceived, developed or produced by the Contractor as part of the Work. For the purposes of this agreement, information includes but not limited to: any documents, instructions, guidelines, data, material, advice or any other information whether received orally, in printed form, recorded electronically, or otherwise and whether or not labeled as proprietary or sensitive, that is disclosed to a person or that a person becomes aware of during the performance of the Contract.

I agree that I will not reproduce, copy, use, divulge, release or disclose, in whole or in part, in whatever way or form any information described above to any person other than a person employed by Canada on a need to know basis. I undertake to safeguard the same and take all necessary and appropriate measures, including those set out in any written or oral instructions issued by Canada, to prevent the disclosure of or access to such information in contravention of this agreement.

I also acknowledge that any information provided to the Contractor by or on behalf of Canada must be used solely for the purpose of the Contract and must remain the property of Canada or a third party, as the case may be.

I agree that the obligation of this agreement will survive the completion of the

Standing Offer No.: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



## **ANNEX F – DATA REPORTING SHEET**

Document is a separate attachment named E-1



## **ANNEX G – RANKING**

*(to be completed at SO award)*



APPENDIX 1 - EVALUATION CRITERIA

Offerors are advised to address these criteria in the following order and in sufficient depth in their proposals to enable a thorough assessment. NRCan’s assessment will be based solely on the information contained within the proposal. NRCan may confirm information or seek clarification from bidders.

Offerors are advised that only listing experience without providing any supporting data to describe responsibilities, duties and relevance to the criteria will not be considered demonstrated for the purpose of this evaluation.

The Offeror should provide complete details as to where, when (month and year) and how (through which activities/ responsibilities) the stated qualifications/experience were obtained. Experience gained during formal education shall not be considered work experience. All criteria for work experience shall be obtained in a legitimate work environment as opposed to an educational setting. Co-op terms are considered work experience provided they are related to the required services.

Offeror are also advised that the month(s) of experience listed for a project whose time frame overlaps that of a nother referenced project will only be counted once. For example: project one time frame is July 2001 to December 2001; project two time frame is October 2001 to January 2002; the total months of experience for these two project references is seven (7) months.

1. Technical Criteria

1.1 Mandatory Evaluation Criteria

The Mandatory Criteria listed below will be evaluated on a simple pass/fail basis. Proposals which fail to meet the mandatory criteria will be deemed non-responsive.

Item	Mandatory Requirement	Compliant (Yes/No)	Reference to Bidder’s Proposal
M1	The bidder must own its own facility equipped to handle the analyses as shown in the SOR ( <b>Annex A-1</b> ) and provide the address of each owned facility used.  Subcontracting <u>is not permitted</u> due to the chain of custody concerns.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M2	The Offeror’s laboratory must hold a valid ISO 17025 certification in environmental or mineral analysis  <b>OR</b>  ISO 9001:2000 Certification  Provide proof of certification (s)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M3	The Offeror’s laboratory must have at least ten (10) years of experience in geochemical analysis.  The Offeror should demonstrate in a maximum of 8 pages.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M4	The Offeror’s laboratory must have a minimum of five (5) years of experience providing data by each of the mandatory analytical packages listed in Annex A-1 – Statement of Requirements.  The Offeror should demonstrate in a maximum of 10 pages.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M5	The Offeror must list up to a maximum of five (5) major analytical projects within the last ten (10) years.  The Offeror should demonstrate in a maximum 8 pages	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M6	The Offeror’s laboratory must:  a) Offer on at least one (1) Stream and be able to provide all of the mandatory packages within that Stream:  b) Offer the mandatory suite of elements at the stated detection limits or better. The required suites of elements and	<input type="checkbox"/> Yes <input type="checkbox"/> No	



	<p>corresponding detection limits can be found in Annex A-1</p> <p>c) Within Annex A, the Offeror should insert within the column named “offering” a Check-mark to indicate the Package (s) an offer is being made.</p> <p><b>STREAM 1:</b> The Offeror must bid, at a minimum, on the packages 1-7d, 8a-b and 17.</p> <p><b>STREAM 2:</b> The Offeror must bid, at a minimum, on the Package 1</p> <p><b>STREAM 3:</b> The Offeror must bid, at a minimum, on packages 1 through to 24.</p> <p><b>STREAM 4:</b> The Offeror must bid, at a minimum, on the following mandatory packages: 1, 2, 4, 5, and 6</p>		
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2. Financial Criteria

2.1 Mandatory Financial Criteria

Bidders must provide financial details as requested in Appendix 2 – Financial Proposal form. Proposals which do not contain pricing details as requested below shall be considered incomplete and non-responsive.

For Financial evaluation purposes, the Offeror must offer a minimum of one (1) Stream and must provide pricing for the mandatory packages within that Stream (s) marked in Red font.

Note: The offeror must bid on the following mandatory packages as follows: **STREAM 1:** The Bidder must bid, at a minimum, on the packages 1-7d, 8a-b and 17; **STREAM 2:** The Bidder must bid on the Package 1; **STREAM 3:** The Bidder must bid on packages 1 through to 24; **STREAM 4:** The Bidder must bid, at a minimum, on the following mandatory packages: 1, 2, 4, 5, and 6

APPENDIX 2 - FINANCIAL PROPOSAL FORM

1. Firm Price

Offerors tendered all-inclusive firm price to perform the work is Canadian funds, applicable taxes excluded. Any Travel and Living Expenses and other miscellaneous expenses must be included in the firm price.

NOTE: The following packages will used for the financial evaluation:

- STREAM 1:** The Offeror must bid, at a minimum, on the mandatory packages in Red font 1-7d, 8a-b and 17.
- STREAM 2:** The Offeror must bid , at a minimum, on the mandatory Package 1 in Red font.
- STREAM 3:** The Offeror must bid, at a minimum, on the mandatory packages in Red font 1 through to 24.
- STREAM 4:** The Offeror must bid, at a minimum, on the mandatory packages in Red font 1, 2, 4, 5, and 6

		Firm all-inclusive rate per package			
		(including labeling, rebagging, transportation/shipping, disposal and storage up to two (2) months)			
Package	Stream 1 Packages Major and Trace Element Packages	Initial Contract Date of Award to March 15, 2024 Price per sample	Option Year 1 March 16, 2024 to March 15, 2025 Price per sample	Option Year 2 March 16, 2025 to March 15, 2026 Price per sample	Option Year 3 March 16, 2026 to March 15, 2027 Price per sample
1	“Whole rock” analysis; major elements by fused disk XRF or borate fusion/ ICP-ES (Estimated annual samples = 5000)	\$ _____	\$ _____	\$ _____	\$ _____
2	Loss-on-Ignition @ 500°C (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
3	Loss-on-Ignition @ 1000 °C (Estimated annual samples = 400)	\$ _____	\$ _____	\$ _____	\$ _____
4	Determination of volatiles, S and C, by combustion/infrared (Estimated annual samples = 1000)	\$ _____	\$ _____	\$ _____	\$ _____
5	FeO by titration (Estimated annual samples = 800)	\$ _____	\$ _____	\$ _____	\$ _____
6	“Whole rock” major, minor, trace and rare earth elements by Lithium borate fusion ICP-MS (Estimated annual samples = 5000)	\$ _____	\$ _____	\$ _____	\$ _____
7	a) Trace elements by ICP-ES+MS with a aqua regia decomposition b) Trace elements by ICP-ES+MS with aqua regia decomposition on up to 30 gram samples c) Optional add-on Rare Earth Elements (REE) d) Optional add-on elements Pt and Pd e) Ultra-trace elements by ICP-ES+MS with a aqua regia decomposition (Estimated annual samples = 16,000)	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____
8	a) Trace elements by ICP-ES+MS with “near-total 4-acid decomposition” b) Trace elements + REEs by ICP-ES+MS with “near-total 4-acid decomposition” c) Ultra-trace elements by ICP-ES+MS with “near-total 4-acid decomposition” and optional REE add-on.	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____



	(Estimated annual samples = 5000)				
9	Lattice water (H <sub>2</sub> O+) (Estimated annual samples = 800)	\$ _____	\$ _____	\$ _____	\$ _____
10	Fluorine by Lithium borate fusion + ion specific electrode (Estimated annual samples = 2000)	\$ _____	\$ _____	\$ _____	\$ _____
11	Lead Collection Fire Assay with ICP-ES/MS for Au+Pt+Pd (Estimated annual samples = 800)	\$ _____	\$ _____	\$ _____	\$ _____
12	Total Organic Carbon (Estimated annual samples = 400)	\$ _____	\$ _____	\$ _____	\$ _____
13	Total Inorganic Carbon (Estimated annual samples = 400)	\$ _____	\$ _____	\$ _____	\$ _____
14	Total Graphitic Carbon (Estimated annual samples = 100)	\$ _____	\$ _____	\$ _____	\$ _____
15	CO <sub>2</sub> by Coulometry (Estimated annual samples = 100)	\$ _____	\$ _____	\$ _____	\$ _____
16	Sulphides by Infrared (Estimated annual samples = 200)	\$ _____	\$ _____	\$ _____	\$ _____
17	Major, minor and trace elements by ICP-ES+MS with sodium peroxide fusion (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
	Laboratory Preparation for Stream 1 Packages				
18	a) Splitting of sediment samples b) Drying sediments at room temperature c) Sieving of air-dried sediments (Estimated annual samples = 1000)	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____
19	a) Crushing of rock samples at 75% for the 2mm mesh b) Splitting crushed sample (Estimated annual samples = 2000)	a) \$ _____ b) \$ _____	a) \$ _____ b) \$ _____	a) \$ _____ b) \$ _____	a) \$ _____ b) \$ _____
20	Coarse crush and pulverize entire sample to better than 85% passing through 75 micron mesh. For samples up to 3 kg. (Estimated annual samples = 300)	\$ _____	\$ _____	\$ _____	\$ _____
21	Pulverization at 85% for the 75 micron mesh of sediments or crushed rocks: a) Using soft steel mill b) Using Cr-free hardened steel mill c) Using ceramic mill d) Using tungsten carbide mill e) Using agate mill f) Cleaning mill between samples with sand or glass (Estimated annual samples = 2000)	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____ f) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____ f) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____ f) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____ f) \$ _____
22	a) Separation of the <0.002mm fraction by centrifugation b) Maceration or milling of vegetation samples c) Ashing of vegetation samples (Estimated annual samples = 2000)	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____
Mandatory Packages 1-7d, 8a-b and 17 Total Firm Price for Financial Proposal Evaluation		\$ _____	\$ _____	\$ _____	\$ _____
STREAM 1 - Grand Total for Financial Proposal Evaluation		\$ _____			





		Firm all-inclusive rate per package			
		(including labeling, rebagging, transportation/shipping, disposal and storage up to two (2) months)			
Package	Additional Packages for Stream 1 Include additional Packages in the space provided below. Note: this pricing will not be included in the financial evaluation.	Initial Contract Date of Award to March 15, 2024 Price per sample	Option Year 1 March 16, 2024 to March 15, 2025 Price per sample	Option Year 2 March 16, 2025 to March 15, 2026 Price per sample	Option Year 3 March 16, 2026 to March 15, 2027 Price per sample
1		\$ _____	\$ _____	\$ _____	\$ _____
2		\$ _____	\$ _____	\$ _____	\$ _____
3		\$ _____	\$ _____	\$ _____	\$ _____

		Firm all-inclusive rate per package			
		(including labeling, rebagging, transportation/shipping, disposal and storage up to two (2) months)			
Package	Stream 2 Package Neutron Activation Analysis	Initial Contract Date of Award to March 15, 2024 Price per sample	Option Year 1 March 16, 2024 to March 15, 2025 Price per sample	Option Year 2 March 16, 2025 to March 15, 2026 Price per sample	Option Year 3 March 16, 2026 to March 15, 2027 Price per sample
1	Multi-element package by neutron activation (NAA) on up to 30 gram samples (Estimated annual samples = 10,000)	\$ _____	\$ _____	\$ _____	\$ _____
Mandatory Package 1 Total Firm Price for Financial Proposal Evaluation		\$ _____	\$ _____	\$ _____	\$ _____
STREAM 2 - Grand Total for Financial Proposal Evaluation		\$ _____			

		Firm all-inclusive rate per package			
		(including labeling, rebagging, transportation/shipping, disposal and storage up to two (2) months)			
Package	Additional Packages for Stream 2 Include additional Packages in the space provided below. Note: this pricing will not be included in the financial evaluation.	Initial Contract Date of Award to March 15, 2024 Price per sample	Option Year 1 March 16, 2024 to March 15, 2025 Price per sample	Option Year 2 March 16, 2025 to March 15, 2026 Price per sample	Option Year 3 March 16, 2026 to March 15, 2027 Price per sample
1					



		\$ _____	\$ _____	\$ _____	\$ _____
2		\$ _____	\$ _____	\$ _____	\$ _____
3		\$ _____	\$ _____	\$ _____	\$ _____

Package	Stream 3 Packages Lithogeochemistry of mineralized samples	Firm all-inclusive rate per package (including labeling, rebagging, transportation/shipping, disposal and storage up to two (2) months)			
		Initial Contract Date of Award to March 15, 2024 Price per sample	Option Year 1 March 16, 2024 to March 15, 2025 Price per sample	Option Year 2 March 16, 2025 to March 15, 2026 Price per sample	Option Year 3 March 16, 2026 to March 15, 2027 Price per sample
1	Major elements using X-ray fluorescence (XRF) or ICP-AES. The element packages, minimal limit of detection (L.O.D.) and analytical methods are indicated on tables A and B. (Estimated annual samples = 800)	\$ _____	\$ _____	\$ _____	\$ _____
2	CO <sub>2</sub> by Infrared or Coulometry (Estimated annual samples = 800)	\$ _____	\$ _____	\$ _____	\$ _____
3	C-Organic by Infrared or Leco (Estimated annual samples = 100)	\$ _____	\$ _____	\$ _____	\$ _____
4	C-total and S-total by Infrared or Leco (Estimated annual samples = 300)	\$ _____	\$ _____	\$ _____	\$ _____
5	S-total by Infrared or Leco (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
6	SO <sub>4</sub> by Infrared or Leco (Estimated annual samples = 200)	\$ _____	\$ _____	\$ _____	\$ _____
7	Au – Lead Collection Fire Assay - AA (30g sample) (Estimated annual samples = 800)	\$ _____	\$ _____	\$ _____	\$ _____
8	Trace level PGEs – Fire Assay ICP-MS (Estimated annual samples = 350)	\$ _____	\$ _____	\$ _____	\$ _____
9	Hg – Cold Vapor – AA (Estimated annual samples = 350)	\$ _____	\$ _____	\$ _____	\$ _____
10	Lithium borate fusion and ICP-MS (Zr, Y, Nb, Ba, Rb) (Estimated annual samples = 200)	\$ _____	\$ _____	\$ _____	\$ _____
11	Aqua Regia and ICP-MS (As, Bi, Se, Sb, Te) (Estimated annual samples = 700)	\$ _____	\$ _____	\$ _____	\$ _____
12	Lithium borate fusion and acid digestion for chalcophile elements and ICP-MS and –AES. (Estimated annual samples = 800)	\$ _____	\$ _____	\$ _____	\$ _____
13	FeO – Titration (Estimated annual samples = 800)	\$ _____	\$ _____	\$ _____	\$ _____
14	F – Lithium borate fusion and specific electrode (Estimated annual samples = 350)	\$ _____	\$ _____	\$ _____	\$ _____
15	Cl – INAA (Estimated annual samples = 350)	\$ _____	\$ _____	\$ _____	\$ _____
16	Fire Assay Nickel Sulphide Collection – ICP-MS (Estimated annual samples = 50)	\$ _____	\$ _____	\$ _____	\$ _____
17	Au – Cyanide Extraction – ICP-MS (Estimated annual samples = 25)	\$ _____	\$ _____	\$ _____	\$ _____
18	B – PGNA (Estimated annual samples = 50)	\$ _____	\$ _____	\$ _____	\$ _____
ORE GRADE LEVELS – to be used when maximum L.O.D. is obtained for precious and base metals, and uranium content. Note: the options cannot be fractionated and the Offeror must provide a single price for each option indicated below that includes all elements of a specific option:					
19	Au – Lead Collection Fire Assay - Gravimetric (30g sample) (Estimated annual samples = 200)	\$ _____	\$ _____	\$ _____	\$ _____



20	Au, Ag – Lead Collection Fire Assay - Gravimetric (30g sample) (Estimated annual samples = 200)	\$ _____	\$ _____	\$ _____	\$ _____
21	Au, Pt, Pd – Lead Collection Fire assay – ICP-MS (30g sample) (Estimated annual samples = 25)	\$ _____	\$ _____	\$ _____	\$ _____
22	Cu, Zn, Pb, Ni, – Aqua Regia – ICP-MS (Estimated annual samples = 150)	\$ _____	\$ _____	\$ _____	\$ _____
23	As, Cr – Sodium Peroxide Fusion – ICP-MS (Estimated annual samples = 150)	\$ _____	\$ _____	\$ _____	\$ _____
24	U <sub>3</sub> O <sub>8</sub> – Fusion XRF (Estimated annual samples = 20)	\$ _____	\$ _____	\$ _____	\$ _____
	Laboratory Preparation for Stream 3				
25	a) Splitting of sediment samples b) Drying sediments at room temperature c) Sieving of air-dried sediments (Estimated annual samples = 1000)	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____
26	a) Crushing of rock samples at 75% for the 2mm mesh b) Splitting crushed sample (Estimated annual samples = 2000)	a) \$ _____ b) \$ _____	a) \$ _____ b) \$ _____	a) \$ _____ b) \$ _____	a) \$ _____ b) \$ _____
27	Coarse crush and pulverize entire sample to better than 85% passing through 75 micron mesh. For samples up to 3 kg. (Estimated annual samples = 300)	\$ _____	\$ _____	\$ _____	\$ _____
28	Pulverization at 85% for the 75 micron mesh of sediments or crushed rocks: a) Using soft steel mill b) Using Cr-free hardened steel mill c) Using ceramic mill d) Using tungsten carbide mill e) Using a gate mill f) Cleaning mill between samples with sand or glass (Estimated annual samples = 2000)	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____ f) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____ f) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____ f) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____ d) \$ _____ e) \$ _____ f) \$ _____
29	a) Separation of the <0.002mm fraction by centrifugation b) Maceration or milling of vegetation samples c) Ashing of vegetation samples (Estimated annual samples = 2000)	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____
Mandatory Packages 1-24 Total Firm Price for Financial Proposal Evaluation		\$ _____	\$ _____	\$ _____	\$ _____
STREAM 3 - Grand Total for Financial Proposal Evaluation		\$ _____			

		Firm all-inclusive rate per package			
		(including labeling, rebagging, transportation/shipping, disposal and storage up to two (2) months)			
Package	Additional Packages for Stream 3 Include additional Packages in the space provided below.	Initial Contract Date of Award to	Option Year 1	Option Year 2 March 16, 2025 to	Option Year 3 March 16, 2026 to



	<b>Note: this pricing will not be included in the financial evaluation.</b>	<b>March 15, 2024 Price per sample</b>	<b>March 16, 2024 to March 15, 2025 Price per sample</b>	<b>March 15, 2026 Price per sample</b>	<b>March 15, 2027 Price per sample</b>
1		\$ _____	\$ _____	\$ _____	\$ _____
2		\$ _____	\$ _____	\$ _____	\$ _____
3		\$ _____	\$ _____	\$ _____	\$ _____

		Firm all-inclusive rate per package (including labeling, rebagging, transportation/shipping, disposal and storage up to two (2) months)			
Package	Stream 4 Packages Hydrogeochemical Packages	Initial Contract Date of Award to March 15, 2024 Price per sample	Option Year 1 March 16, 2024 to March 15, 2025 Price per sample	Option Year 2 March 16, 2025 to March 15, 2026 Price per sample	Option Year 3 March 16, 2026 to March 15, 2027 Price per sample
1	Conductivity, TDS and pH (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
2	Alkalinity of water by titration (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
3	Total Organic Carbon in water (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
4	Dissolved Anions in water by Ion Chromatography (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
5	Dissolved major elements by ICP-OES/ICP-AES (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
6	Dissolved major and trace elements by ICP-MS (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
7	Ultra-trace analysis of dissolved Au analysis of waters by ICP-MS (Estimated annual samples = 500)	\$ _____	\$ _____	\$ _____	\$ _____
	Laboratory Preparation for Stream 4				
8	Hydrogeochemical sample preparation:a) Acidification of samples for trace and major element analysis using 1% (sample volume) ultrapure 8N HNO <sub>3</sub> and refrigerated for two weeks a) DOC sample filtered to 0.45 µm b) Acidification of Au sample for ultra-trace analysis using aqua regia c) Chemical treatments for Au desorption from sample vessels (Estimated annual samples = 500)	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____	a) \$ _____ b) \$ _____ c) \$ _____
Mandatory packages 1, 2, 4, 5, 6 Total Firm Price for Financial Proposal Evaluation		\$ _____	\$ _____	\$ _____	\$ _____
STREAM 4 - Grand Total for Financial Proposal Evaluation		\$ _____			



		Firm all-inclusive rate per package			
		(including labeling, rebagging, transportation/shipping, disposal and storage up to two (2) months)			
Package	Additional Packages for Stream 4 Include additional Packages in the space provided below. Note: this pricing will not be included in the financial evaluation.	Initial Contract Date of Award to March 15, 2024 Price per sample	Option Year 1 March 16, 2024 to March 15, 2025 Price per sample	Option Year 2 March 16, 2025 to March 15, 2026 Price per sample	Option Year 3 March 16, 2026 to March 15, 2027 Price per sample
1		\$ _____	\$ _____	\$ _____	\$ _____
2		\$ _____	\$ _____	\$ _____	\$ _____
3		\$ _____	\$ _____	\$ _____	\$ _____

FOR ANY ERRORS IN THE CALCULATION, THE PACKAGE RATE WILL BE UPHELD.