

Invitation To Quote (ITQ)

ITQ 2024-01

**Critical Minerals & Metals in British Columbia
Mine Tailings & Waste Rock: Phase 1**

This Invitation to Quote is looking for proponents to identify, collate and present existing data about critical minerals and metals in current and historic mine sites across BC.

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1. INVITATION TO QUOTE (ITQ) KEY DETAILS

Title	ITQ 2024-01 Critical Minerals & Metals in British Columbia Mine Tailings & Waste Rock: Phase 1
Issue Date	April 3, 2024
Submission Deadline:	April 19, 2024 12:00 noon Pacific Daylight Time
Quote Validity Date	July 31, 2024
Estimated Review Conclusion	April 26 2024
Earliest Project Start Date	April 26, 2024
ITQ Coordinator:	Brady Clift, Manager of Minerals Email: clift@geosciencebc.com

Problem Statement

Critical minerals and metals are essential to Canada's economic security and for the transition to a net zero emissions economy. Canada's critical minerals list includes 31 minerals and metals, 21 of which are produced in Canada, with potential for further resource development. Mine tailings and waste rock resulting from production at current and historical mine sites may contain economic concentrations of critical minerals and metals that were not recoverable or considered valuable at the time of extraction.

Geoscience BC's multi phase Critical Minerals & Metals in British Columbia Mine Tailings & Waste Rock program will identify and test tailings and waste rock to discover if there are economic opportunities to extract further value from these mining by-products while addressing potential environmental liabilities. It is closely aligned with provincial and federal critical minerals objectives, including the 2022 Auditor General's report calling for innovative mechanisms to fund reclamation activities. It will also incorporate needs of industry, communities and Indigenous groups. The overall program (subject to regulatory approval) aims to:

- Identify suitable mine tailings and waste rock facilities in British Columbia to undertake lab and field-scale studies for critical minerals and metals;
- Attract investment to BC by demonstrating an innovative approach to critical minerals and metals research; and collaboration between the research ecosystem and governments, industry, academia, communities and Indigenous groups;
- Foster collaboration, expand research expertise and build capacity and training opportunities across mineral systems and the mining lifecycle; and
- Engage the broader minerals industry, from geoscience and exploration to mine development and mineral processing/metallurgy.

This Invitation to Quote (ITQ) is for Phase 1 of the program. Phase 1 will focus on compiling information related to legacy and operating mine sites across BC and presenting it in a digital user-friendly dataset that can be integrated with ESRI GIS software. Targeted information will include, but is not limited to, abandoned and operating mine sites, tailings and waste rock facilities, deposit type, geology, alteration, geochemistry, metallurgy, mineralogy and known infrastructure.

Phase 1 Scope

The successful proponent will identify and digitally compile datasets pertaining to the location, history, status and composition of mine tailings and waste rock in British Columbia (see Appendix A for list of requested data), as well as relevant administrative, infrastructure and other datasets that would be useful to guide exploration, mining, government and community interests. The successful proponent will, in partnership with Geoscience BC, collate mineral exploration and mining company data identified during the project and incorporate it into the final product, within reason. The proponent will also incorporate socio-economic datasets developed and provided by Geoscience BC and partners. Similar initiatives include Geoscience Australia’s Atlas of Australian Mine Waste (<https://portal.ga.gov.au/persona/minewaste>) and the Minnesota Natural Resource Atlas, Iron Ranges – Mine Pits (https://mnatlas.org/gis-tool/?id=k_0136).

From this, the successful proponent will develop and deliver a comprehensive GIS database and accompanying report that can be utilized to identify priority sites for various scoping and technical investigations in later phases of this program.

Phase 1 will be undertaken with ongoing guidance from Steering and Project Advisory Committees organized by Geoscience BC. The Project Advisory Committee will help guide the project scope and outputs as the volume and types of potential data for incorporation become more certain as the project progresses. In addition, First Nations input will be sought and integrated with technical criteria where possible. This will be guided by Geoscience BC’s Indigenous Relations and Reconciliation Advisory Council.

The successful proponent will provide monthly written project updates that include progress updates, screenshots and data examples, and participate in meetings with the Project Advisory Committee throughout the project (Table 1).

Table 1. Tentative Reporting and Meeting Schedule (subject to change)

Proposed Date	Report/Meeting
May 15th	Project initiation meeting
May 26th	Monthly written project update
June 26th	Monthly written project update
July 15th	Mid-project update meeting
July 26th	Monthly written project update
August 26th	Monthly written project update
September 26th	Monthly written project update
October 25th	Monthly written project update
November 1st	Draft final report meeting
December 1st	Near final report meeting

Specifically, the final products will include the following:

- Summary Report
 - A plain-language executive summary written to aid non-technical readers such as community leaders
 - A list of all data sources compiled and /or incorporated into the project, including dates of access
 - Knowledge gaps, opportunities and risks identified during the course of the project
 - Recommended additional data collection work to augment the Phase 1 products
- Data
 - Digital datasets in industry-standard formats as complementary to the report
 - Readme file that describes and includes metadata to complement final datasets
- Data Presentation
 - Digital dataset available in filetype compatible with ESRI GIS software

Geoscience BC will coordinate a peer review of the draft final report, and the successful proponent will incorporate the requested changes into a final product suitable for publication.

The successful proponent will work with Geoscience BC and its partners on publication and access to the report and associated datasets and announcement of the report results using press releases and social media.

The successful proponent will assist Geoscience BC in raising awareness of this project through participation in online or in-person events.

A maximum of \$225,000, plus GST if applicable, is available at this time for Phase 1 work (including cost estimates associated for data compilation and formatting, reporting, travel and promotion). More information on budget requirements can be found in the Budget section below.

Project Deadline and Schedule

All project-related work and deliverables (summary report and data) must be received by Geoscience BC in draft format for peer review by November 1, 2024. All final files, having addressed comments from the peer review process, must be received by Geoscience BC by December 13, 2024.

In addition to the written monthly project updates, the successful proponent will meet with the Project Advisory Committee a minimum of four times during the project (in person/online meeting format to be determined). The date and time of these meetings is to be determined, but are anticipated to be:

- Project Initiation meeting
- One mid-project Update meeting
- Presentation of Draft Final Report meeting
- Near Final Report Meeting

The successful proponent will participate in up to three public engagement events as requested by Geoscience BC, both as the project work is underway, and in the month following the public release of

project results (tentatively January/February 2025). The proponent should budget for 2 online and 1 in-person (e.g., conference presentations) events, where presentation preparation, travel and other associated costs should be considered in the proposed project budget.

2. ITQ SUBMISSION GUIDELINES

INTRODUCTION

In support of our mission to generate and publicly share high quality and unbiased earth science research and data in British Columbia, Geoscience BC issues Invitations to Quote (ITQ).

The ITQ process gives communities served by Geoscience BC an opportunity to directly propose research projects to be undertaken, or to propose solutions to established Geoscience BC research objectives.

ELIGIBILITY

Applicants who wish to submit a quote should be aware the following eligibility criteria:

- Quotes concern research that is materially contained within or affecting British Columbia, Canada. However, researchers or organizations may reside outside of the province or country.
- Quotes will be considered from individuals or teams representing or partnered with Indigenous groups, communities, governments, resource sectors, private consultants, universities or colleges, or not-for-profit agencies.
- Quotes with financial or in-kind support from other organizations will be prioritized.
- Geoscience BC places high value on effective outreach and engagement activities with the resource sectors, academia, communities, Indigenous groups and governments. Successful applicants will be required to participate or lead in these activities as set out in a subsequent Project Agreement.
- As part of the Project Agreement, participants in projects will be required to not acquire mineral tenures within the project area based on access to unpublished project data until the project deliverables are released.
- Applicants must be prepared to carry appropriate insurance coverage, including Workers' Compensation and Commercial General Liability (\$2 million) for the duration of a project. Depending on the nature of the project.

QUOTE SUBMISSION

An applicant is solely responsible for developing a compelling, clear and complete quote.

2.3.1 Three Components of a Complete Submission

There are three components to a complete application that must be received by the Geoscience BC ITQ Coordinator electronically before the Submission Deadline. Hard copies will not be accepted.

i. Notification. Emailed notification of an intent to submit a quote to the ITQ Coordinator. This is important so any updates or clarifications concerning the ITQ process can be shared with you, and so that the ITQ Coordinator knows to expect your quote.

ii. Quote. A quote which includes the following information and is consistent with any instruction included in Appendix B:

- This document must be submitted in MS Word .doc or .docx format
- The quote must include expected sources of public data that can be queried for current and abandoned mine sites, tailings or waste rock piles, along with a description of how data will be collected, vetted and verified from public datasets.
- A description of how other types of data such as unpublished industry data, information from mining and exploration groups (e.g., Chambers of Mines of Eastern British Columbia) and any other sources of data will be integrated if and when it comes available
- A list of expected deliverables including those referenced within this document and other datasets that could be included and why
- A timeline for completion and milestones expected to be achieved during the project
- A description of how data could be presented and queried by end users and what they may be able to find using the database
- The completed Quote (including photos and diagrams) should total no more than 10 pages (8.5x11 inch page size only). It must include a title page indicating the name or company name of the Bidder, the total cost of the quote, contact information for the primary contact and the expected completion date. This does not include the Budget Template, which must be submitted as a separate file, or letters of support. Quotes which exceed this page limit will not be considered.

iii. Budget. A quote budget that is created using the Budget Template (ITQ_2022-005_Budget_Template.xlsx) available online and following any additional instruction included in Appendix C :

- This document must be submitted in MS Excel .xls or .xlsx format.

2.3.2 Clarification of Submission Requirements

Any clarification regarding this process must be directed to Geoscience BC at least two (2) working days before the Submission Deadline. Geoscience BC shall not be responsible for any misunderstanding of the ITQ Documents.

To ensure all participants in the ITQ process have equal information, answers to enquiries which are relevant to the ITQ process will be communicated through the Geoscience BC website and to applicants who have sent a notification of intent to submit a quote.

2.3.3 Changes to the ITQ Documents

Geoscience BC may, prior to the Submission Deadline, without liability, cost or penalty, alter the Submission Deadline and amend or supplement the ITQ Documents by addenda only. No other communications of any kind whatsoever will modify the ITQ Documents.

2.3.6 Validity of Quote

Any budget estimates associated with the quote must remain valid for acceptance up to the Quote Validity Date.

2.3.7 Amendment of Quote

A quote may be amended prior to the Submission Deadline by withdrawing the original quote and submitting a revised quote.

After the ITQ Submission Deadline, no updates to the quote will be accepted, unless requested by Geoscience BC.

2.3.8 Costs of a Quote Preparation

The applicant shall bear all costs and expenses with respect to the preparation and submission of its Quote and any other activity pertaining to its quote, including its participation in the ITQ process and contract negotiation, if any. Geoscience BC shall not be liable to pay any such costs/expenses regardless of the conduct or the outcome of the ITQ process.

2.3.9 Absence of Contractual Obligations during ITQ Process

Geoscience BC shall have no obligation to enter into a contract with an applicant.

Geoscience BC shall only have obligations to an applicant if it decides to execute a Project Agreement and such obligations shall be in accordance with the terms and conditions of that agreement as finalized between Geoscience BC and the Proponent.

2.3.10 Overarching Rights of Geoscience BC

Geoscience BC reserves the right to annul this ITQ process and commence a new process, reject

any or all quotes received in response to this ITQ and accept any quote in whole or in part.

REVIEW PROCESS AND SELECTION

After the Submission Deadline has passed, a volunteer Project Advisory Committee (PAC) made up of subject matter experts will evaluate the quotes received.

Geoscience BC shall, at its sole discretion, use any evaluation criteria (whether subjective or objective), it deems suitable to evaluate the quotes.

Quote review and ranking will be undertaken by the Project Advisory Committee. Geoscience BC staff do not participate in ranking and all PAC Members must follow Geoscience BC's Code of Conduct and Ethics, and Conflict of Interest Guidelines.

2.4.1 Review Process and PAC Recommendations

The process for quote review by the PAC includes:

- Determine if the quote is within the scope set out in the ITQ process and provides the content and budget required.
- Discuss the quote with a focus on technical quality, sector relevance, personnel involved and budget as detailed in the next section.
- Rank the quote in relation to all the quotes in hand.
- Make a recommendation to Geoscience BC and the project Steering Committee for consideration.

2.4.2 Technical Review Criteria

The technical review of a quote will consider, as a minimum, the following general categories and questions:

- **Technical quality** – Is the quote technically sound, feasible, and well defined with clearly articulated objectives? Does it improve our collective level of geoscience knowledge? Will it facilitate responsible natural resource development and stimulate innovation and geoscience technologies?
- **Personnel** – Do the Proponents have the experience and qualifications to complete the project? Have previous projects been completed and delivered in a timely manner? Are there any training aspects to the project?
- **Budget** – Is the budget well defined and competitive? Is it realistic? Has the quote generated supportive funding?

2.4.3 Confidentiality in the Review Process

Geoscience BC's quote ranking results, and recommendations for funding will remain confidential to Geoscience BC.

Geoscience BC and its partners will take all reasonable precautions to maintain the confidentiality of the information submitted by the applicants, subject to any disclosure required by law. Geoscience BC reserves the right, however, to disclose the quote to employees, servants, agents, advisors and consultants of Geoscience BC and its partners and affiliates for the purpose of assisting Geoscience BC in evaluating the quote.

Any employees, servants, agents, advisors and consultants of Geoscience BC and its partners and affiliates who assist Geoscience BC in the evaluation of the quote will also be required to take all reasonable precautions to maintain the confidentiality of the information submitted by the applicants, subject to any disclosure required by law. The employees, servants, agents, advisors and consultants of Geoscience BC and its partners and affiliates will not be liable for any damages resulting from any disclosure before, during or after the issuance of this ITQ and the submission of a quote.

2.4.4 Clarification in Review Process

Geoscience BC may, at its sole discretion, seek clarification of any matter in a quote in any manner it considers appropriate including investigating the abilities and experience of the project participants, seeking information from other parties, requiring the applicants to submit supplementary documentation and seeking the validation of Geoscience BC's interpretation of the quote.

REVIEW NOTIFICATION AND PROJECT FUNDING AGREEMENTS

Applicants will be notified when their quote is received and if their application has been successful after the Project Advisory Committee's review is complete.

If no suitable quotes are received, no project funds will be awarded.

2.5.1 Notification of Successful Application

Geoscience BC will provide a letter via email to the successful applicant indicating their quote was accepted for funding.

Geoscience BC reserves the right to approve a smaller scope and budget than submitted in the quote and/or ask for revisions or modifications.

2.5.2 Notification of Unsuccessful Application

Geoscience BC will provide a letter via email to each unsuccessful applicant indicating their quote was not accepted for funding.

2.5.3 Negotiation of a Project Agreement

Geoscience BC will initiate project funding agreement negotiations with the successful applicant. The quote document and budget form the specifics of a Project Funding Agreement.

Information on projects, and the names of the Proponent, Principal Investigator and Project Contributors will be published on Geoscience BC's website.

2.5.4 Project Start and Completion Dates

Projects should not be expected to start earlier than the Earliest Project Start Date and must be completed with final deliverables accepted by Geoscience BC, no later than the project completion date set out in the Project Agreement.

2.5.6 Applicable Laws

Any Project Agreements subsequently negotiated and awarded with respect to this ITQ shall be interpreted and governed, and the relations between the Parties determined, by the laws in force in the province of British Columbia and the Parties attorn to the jurisdiction of the British Columbia Courts.

ADDITIONAL INFORMATION

2.6.1 Information Provided by Geoscience BC

No representation or warranty, expressed or implied, is made and no responsibility of any kind is accepted by Geoscience BC, or its advisors, employees, consultants or agents, for the completeness or accuracy of any information contained in the ITQ Documents or that is provided during the ITQ process or contract negotiation process, or under a contract that may be entered into, if any.

2.6.2 No Public Statements

Recipients of or applicants to this ITQ shall not issue any public statement or news release pertaining to this ITQ or subsequent Project Agreement without the prior written consent of Geoscience BC.

CONTACT INFORMATION

Requests for further information, clarification or for any other purpose related to this ITQ should be directed to the ITQ Coordinator.

APPENDIX A – LIST OF REQUIRED DATASETS

This list is not a comprehensive list of the required or requested datasets for the project. It is conceivable that many locations will not have the complete list available and in some instances the data may not be available for any locations. Also, as requested in section 2.3.1.ii, include any datasets that you know to be available or that could be available and relevant to the project but are not included in this list as part of your ITQ submission.

*When available the following list of data should be included for each identified mine tailings and waste rock location	
Data	Description
Location of mine tailings and waste rock piles (active/abandoned)	Coordinate system suitable for BC (e.g., BC Albers, NAD83, WGS84), confidence of location data considering some spots may require georeferencing
Deposit type	When known the type of deposit that was mined (e.g., porphyry, VMS, etc.)
Geology of mined rock	When available include the geology and geological setting
Geologic alteration	When available include the geologic alteration of the rock
Mining statistics	Amount of ore or mineral processed
Mined metals and minerals	Types of minerals mined and if they are on the critical minerals list
Geochemistry availability	Is there geochemical results available from the mine, tailings or waste pile and are they accessible through this project or elsewhere
Associated critical minerals and metals	What critical minerals and metals could be expected to be associated with the deposit given the known information
Mining method/status	Open pit/underground/other, operating/standby/care and maintenance/etc.
Cut-off grade	Cut-off grade for ore at the time of mining
Size of site	If known the size of the site impacted by the mining process
Mines	Location of active mine sites
Smelters	Location of active smelters
Nearest Community	Nearest community
Environmental Considerations	Is there any known remediation or environmental concerns identified
Water	Distance to nearest waterbody or water source
Land ownership	Is the site on crown or private land, is the owner known or how can information about the owner be found
Remediation Status	Was the site properly remediated or are their funds/plans to remediate the site
Dates of activity	When was the site actively being mined (start and date in years)

APPENDIX B - QUOTE TEMPLATE AND INSTRUCTIONS

A Quote for this ITQ must be submitted in MS Word .doc or .docx format.

The completed Quote (including photos and diagrams) should total no more than 10 pages (8.5x11 inch page size only). It must include a title page indicating the name or company name of the Bidder, the total cost of the quote, contact information for the primary contact and the expected completion date. This does not include the Budget Template, which must be submitted as a separate file, or letters of support. Quotes which exceed this page limit will not be considered.

Do not include promotional material or brochures as an attachment to the application.

APPENDIX C - BUDGET TEMPLATE AND INSTRUCTIONS

A budget template is available online for this ITQ at the Geoscience BC website ITQ section. This template (ITQ_2022-005_Budget_Template.xlsx) needs to be completed and submitted to Geoscience BC in .xls or .xlsx format (do not submit as a .pdf).

Add lines as necessary to properly complete your budget (e.g., if there are multiple personnel at different rates of pay, add a line for each group). Sub-categories (e.g., camp costs, fluid inclusions etc.) can be edited to best fit your application, and sub-categories not used should be deleted. All costs must be in Canadian dollars.

Display columns for budget totals for the entire project. If desired, the budget can also be broken down by major stages identified by summary tasks or by year, but the total budget for the whole project must be readily apparent.

Please be sure to confirm that your budget spreadsheet adds up correctly, and that the numbers included match the summary information you include in the Quote Template.

The successful quote should include budget for the following:

- Time to collect and organize datasets into a format suitable for display in a GIS environment and for download for offline use; and to review engagement materials (e.g. website content, news releases).
- Production of final products and reports that includes time for revisions after Geoscience BC's peer review process
- Participation in meetings with Geoscience BC and PAC as described in this document
- Participation in up to three online or in-person outreach events

Additional Instructions for Completing a Budget

5.1.1 Goods and Services Tax ("GST")

If GST paid by the Proponent is claimed as a project expense for reimbursement by Geoscience BC, the Proponent will provide Geoscience BC with a detailed breakdown of these amounts together with an explanation as to why these amounts were not claimed as input tax credits or GST rebates, and copies of all invoices on which GST was paid and is being claimed as a project

expense, including the GST registration number of each supplier.

5.1.2 Capital Costs

Geoscience BC does not cover Capital Costs over \$1,000 (e.g., computer purchases, field gear) without prior approval. Capital Costs (if any) should be itemized in the budget.

5.1.3 Overhead

Please be aware that Geoscience BC does not pay overhead. For university applicants, a letter confirming Geoscience BC's policy regarding overhead can be provided on request during the application process.

5.1.4 Insurance Coverage

Please be aware that Geoscience BC requires that appropriate insurance coverage be maintained for the duration of each project.

Mandatory:

- Workers Compensation
- Commercial General Liability (minimum of \$2 million)

As needed:

- Automobile (\$2 million)

5.1.5 Matching Cash and In-Kind Funding

Include a summary of any matching cash or in-kind funding that the applicant would bring to the project (details of each additional funding source should be included in the Quote).