

5. SCOPE OF WORK

The scope of work includes the work identified in this Statement of Work (SOW) and the identified services for the “Departmental Representative” in the Remediation Contract and applies to the Consultant and any Sub-Consultants or Specialty Consultants disciplines that may be required for the CAM-E Remediation Prime Consultant Services.

5.1. Site Supervision and Contract Administration Services

5.1.1. General

1. Review and be familiar with the Remediation Contract documents and all supporting documents.
2. Provide continuous supervision entire time Contractor is on site
3. Provide all inspections, testing, specialized testing and confirmation sampling as required by Contractor as to not delay remediation work
4. Provide clarification instructions, Contemplated Change Notices, and Change Orders as required.
5. Provide Site Instructions
6. Consider and evaluate any suggestions or modifications to the documents advanced by the Contractor and immediately report these to the Project authority with comments.
7. Convey instructions regarding the required standards of workmanship to the Contractor.
8. Communicate formally with the Contractor via memorandum form only. When this form is issued, the Consultant will immediately file copies with the Project authority.
9. Ensure that the Project authority is notified promptly when key pieces of components of materials and equipment are delivered, so that these parties can arrange for the appropriate personnel to have an opportunity to inspect same prior to installation.
10. Protect Human Remains, Archaeological Remains and Items of Historical Scientific Interest

5.1.2. Supervision

1. Supervise, inspect, co-ordinate and monitor all aspects of the remediation work during the construction, ensure remediation work is in accordance with Remediation Tender Documents and liaise with the Project authority.
2. Supervise, review and approve contractor survey and measurements
3. Provide Work Measurements
4. Be responsible for the measurement of all work to be done on a unit-cost basis.
5. Be responsible for the measurement of percentage completion of lump sum item.
6. Supervise and ensure remediation work is in accordance with Remediation Contract
7. Supervise soil excavation activities, collect confirmation samples, inspect and report of results, confirm compliance to Remediation Contract.

5.1.3. Inspections and Testing

1. Provide inspection for all aspects of the project, maintaining daily records of all work.
2. Inspect the Contractor mobilization and demobilization activities.
3. Accompany the Project authority on inspections and record comments or instructions of the Project authority.
4. Assist in the preparation of all deficiency, Substantial Completion, preliminary, and final reports in collaboration with the Project authority.
5. Conduct Substantial Completion Inspection of site
6. Conduct Final Inspection of site
7. Issue Substantial Completion and final deficiency reports.
8. Assist (if required) in release of holdback upon satisfactory completion.
9. Provide on part-time basis Sub-Consultants or Speciality Consultants required to perform specialized on-site inspections.
10. Provide Specialized Inspection and Testing as required
11. Test materials to meet the specifications, compaction testing, supervision of material placements, confirmation of compliance to all permits and assistance to the Consultant.
12. Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project.
13. Assess quality of work and identify, in writing to the Project authority, all defects and deficiencies observed at time of such inspections.
14. Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project.
15. Make on-site observations and spot checks of the work to determine whether the work, materials and equipment conform with the Contract Documents and supplementary documentation.
16. Provide specialized services by Environmental, Geotechnical and Demolition as required during the remediation work and as outlined in the Remediation Contract
17. Assist the Project Authority in briefing the testing firm on required services, distribution of reports, communication lines, etc.
18. Assist the Project authority in evaluating firm's invoices for services performed.
19. Ensure that the tests and inspections required by the Contract Documents are conducted, and should observe these tests and report the results in the daily log.
20. Provide non-resident inspection services by qualified personnel to ensure compliance with Contract Documents. These personnel will be fully knowledgeable with technical and administrative requirements of project.
21. Establish a written understanding with Contractor as to what stages or aspect of the work are to be inspected prior to being covered up.
22. Notify the Project authority if the test results do not meet the specified requirements, or if the Contractor does/do not have tests undertaken as required.

5.1.4. Review and Approve

1. Review and approve As-Built and Record Drawings
2. Review and Approve Contractor's Progress Payments
3. Review and process shop drawings.
4. Review testing methods, data of inspection/testing agencies.
5. Verify quantities of materials received and record work progress through review and verification of Contractor survey data and measurements.
6. Review and approve all test reports and take necessary action with Contractor when work fails to comply with Contract requirements. The Project authority will be immediately notified when tests fail to meet project requirements and when corrective work will affect the schedule.

5.1.5. Site Safety

1. Adhere to Contractor's Site Specific Health and Safety Plan (SSHASP)
2. The Consultant will adhere to the Contractor's Site Specific Health and Safety Plan (SSHASP).
3. Attend Contractor Worker Orientation Seminar
4. In case of emergencies, the Consultant is empowered to stop the work, or give orders to protect the safety of the workers or property and contact the Project authority immediately for further instruction.
5. The Consultant will conduct a Site Safety Survey of the Contractor and the CAM-E Site once during each field season. The Consultant will fill out and submit the Site Safety Survey form located in **Error! Reference source not found.**

5.1.6. Work Measurement

1. If work is based on unit prices, The Consultant will measure, review survey measurements and record the quantities for verification of monthly progress claims and the Final Certificate of Completion.
2. When Contemplated Change Notice, Change Orders or Task Authorization are to be issued based on Unit Prices, the Consultant will keep accurate account of the work and record dimensions and quantities.

5.1.7. Meetings

1. The Consultant will arrange, attend and conduct meetings as defined in Remediation Contract, and weekly teleconference meetings throughout the entire construction period.
Attendees to include:
 - a. Client Department
 - b. PROJECT AUTHORITY in-house staff, as required
 - c. Consultant.
 - d. Contractors and their Subcontractors.

2. The Consultant will attend the meetings, record the issues and decisions and prepare and distribute minutes to all attendees within two (2) days of the meeting.
3. Attend all Community Meetings with Project Authority, Client, Contractor and Community members. Consultant will record the minutes and distribute them as outlined in the specifications and contractor proposal.
4. Attend all other construction meetings implemented by the Contractor and record subjects of interest, as it pertains to the implementation of the remediation work.

5.1.8. Records and Reporting

5.1.8.1. Daily reporting

1. Record and Report daily site activities
2. Finalize project documentation and accounts.
3. Gather, verify and report information required for Water Licence (WL), Land use Permit (LUP) and all other applicable regulations and licence requirements
4. Review and Report on Contractor's Project Schedule
5. Assess quality of work and identify, in writing to the Project authority, all defects and deficiencies observed at time of such inspections.
6. Monitor the progress of Contractors' work, compliance with all drawings and specifications, time schedules, quality standards and progress reports.
7. Report on Contractors maintaining specified quality and schedules, ensuring that Contractors are monitoring delivery of critical materials and equipment.
8. Any directions, clarifications or deficiency lists will be issued in writing to the Project authority, with a copy to the Contractor.
9. Keep the Project authority informed of the progress and quality of the work and report any defects or deficiencies in the work observed during the course of the site reviews.
10. Report if materials and equipment are being incorporated into the project prior to approval of relative shop drawings or samples.
11. Advise the Contractor of any deficiencies or unapproved deviations via memorandum and report immediately to the Project authority any of these on which the Contractor is/are tardy or refuses to correct.

The Consultant will submit a Daily Report for duration of field work (Example located in **Error! Reference source not found.**) to the Project Authority which is a recording of but not limited to:

1. Weather conditions, particularly unusual weather relative to construction activities in progress.
2. Major material and equipment deliveries.
3. Daily activities and major work done.
4. Health and Safety meetings.
5. Start, stop or completion of activities.
6. Presence of inspection and testing firms, tests taken and results.
7. Unusual site conditions experienced.

8. Significant developments, remarks.
9. Special visitors on-site.
10. Authorities given Contractor to undertake certain or hazardous works.
11. Environmental incidents.
12. Reports.
13. Stop work requests by the Project authority.
14. Safety Incidents and Near Misses

Copies of the Daily Reports are to be provided to the Project authority at the end of the project within the Post Construction Summary Report.

5.1.8.2. Post Construction Summary Report

The Consultant will submit an Interim post construction summary report after the remediation work is completed each year. At the end of the project, a comprehensive post construction summary report will be prepared that records the site activities over the full construction contract. An example of the table of contents for the post construction summary report is included in **Error! Reference source not found.**

5.1.8.3. Quarterly reporting

The Consultant will fill out and submit Quarterly Reporting each quarter of the year of the project. The required Quarterly Reporting form is located in **Error! Reference source not found.**

5.1.8.4. Inuit Opportunities Consideration (IOC)

Record and Report site Inuit worker hours on site and Inuit Sub Contractor Content (To be provided by Contractor with Each Progress Payment) in accordance with the Remediation Contract Inuit Opportunities Consideration (IOC). Confirm with Contractor Monthly the current IOC hours and IOC Sub Contractor Content and rectify any discrepancies.

5.1.9. Budget/Cash Flow

Once the Project authority has accepted the Contractor's cost breakdown, the Consultant will:

1. Monitor budget/cash flow requirements as required on a site by site basis.
2. Review value of progress of work against the approved cost breakdown. When each trade is regularly reviewed against the Project Schedule and the cost breakdown, it quickly becomes apparent whether the Contractor is on budget and is generating the appropriate cash flow for the work.
3. Record all discrepancies and agreed remedial measures.

5.1.10. Permits Licences and Authorities having Jurisdiction

The consultant will gather, verify and report information required for Water Licence (WL), Land use Permit (LUP) and all other applicable regulations and licence requirements. The permits are not currently available. Example permits and associated requirements are provided in **Error! Reference source not found..**

5.1.11. Contractor's Project Schedule

The Consultant will:

1. Obtain a Project Schedule from the Contractor as soon as possible after Contract award and ensure proper distribution.
2. Review and advise to ensure that the schedule has detailed components of the work shown separately.
3. Use the schedule as the basis for evaluating the progress of the work, once the Project authority has reviewed the Contractor's Project schedule.
4. Record all discrepancies and agreed remedial measures.
5. Keep accurate records of causes of delays.
6. Make every effort to assist the Contractor to avoid delays.
7. Only the Project authority may authorize any request for Time Extensions. Authorization will be issued in writing.

5.1.12. Shop Drawings

1. The Consultant will review, discuss, record problems and identify agreed remedial action. Monitor and record the progress of shop drawing review. Record parties designated for action and follow up.
2. On completion of project, The Consultant will include copies of reviewed shop drawings to the Project authority as part of the Post Construction Report. The Consultant will ensure that shop drawings include the project number and are recorded in sequence.
3. The Consultant will verify the number of copies of shop drawings required. Consider additional copies for Client's and the Authorities Having Jurisdiction office.
4. Shop drawings will be stamped: "Checked and Certified Correct for Construction" by the Contractor and stamped: "reviewed" before returning to the Contractor.

5.1.13. Site Instructions

1. The Consultant will provide clarifications on Plans and Specifications or site conditions, as required in order that project not be delayed.
2. The Consultant will record Contractor's acknowledgement of receipt of all site instructions, ensure and record that required action does not have an impact on cost or schedule.

3. The Consultant will provide the Project authority information with any additional detail drawings as and when required to properly clarify or interpret the Contract Documents, in a timely manner.

5.1.14. Change Orders

1. The Consultant does not have authority to change the work or the price of the Contract without a Project Authority approved Change Order or instructions in writing from the Project Authority.
2. Change Orders will cover all changes, including those not affecting the cost of the project, such as schedule, substitutions, etc.
3. The Consultant will prepare Contemplated Change Notices (CCN), quotations, reviews and unapproved Change Orders (CO). This includes monitoring and recording the progress of CCN and CO. Work in addition to the current contract will not proceed without written approval from the Project Authority.
4. The Project authority will issue the approved CCN and CO to the Contractor, with a copy to the Consultant.
5. The practice of “trade offs” is not allowed.

5.1.15. Contractor’s Progress Payments

1. Each month, the Contractor submits a progress claim for work and materials as required in the Contract. The claims are made by completing the following forms where applicable:
 - a. Request for Payment.
 - b. Cost Breakdown for Unit and/or combined Price Contract or Cost Breakdown for Fixed Price Contract.
 - c. Statutory Declaration: Progress Claim.
2. The Consultant will determine the amounts owing to the Contractor based on the progress of the work and certify payments to the Contractor.
3. The Consultant will review and sign a separate letter recommending payment of the Progress payment (indicating the amount of the approved invoice in dollars) and promptly forward claims to the Department for processing.

5.1.16. Payment for Materials on Site

1. The Contractor may claim for payment of material on site, but not yet incorporated in work.
2. A detailed list, checked and verified by the Consultant, of materials with supplier’s invoice showing price of each item will accompany each claim.
3. Items will be listed separately on the Detail Sheet showing the breakdown list and total.

5.1.17. Substantial Completion Inspection

1. The Consultant will verify that all items are correctly stated and ensure that completed documents and any supporting documents are given to the Project authority for processing.
2. Payment requires completion and signing, by the parties concerned, of the following documents:
 - a. Certificate of Substantial Performance,
 - b. Cost Breakdown for Fixed Price Contract, or Cost Breakdown for Unit or Combined Price Contract,
 - c. Inspection and Acceptance,
 - d. Statutory Declaration Certificate of Substantial Performance,
 - e. Worker's Compensation Board Certificate.

5.1.18. Final Inspection

1. The Consultant will inform the Project authority when satisfied that all work under the Contract has been completed, including all deficiency items listed during the Substantial Inspection. The Project authority and the Client will be in attendance for the final inspection.
2. The final payment to Contractor requires completion and signing by the parties concerned, of the following documents:
 - a. Certificate of Completion.
 - b. Cost Breakdown for Fixed Price Contract or Cost Breakdown for Unit and/or Combined Price Contract.
 - c. Inspection and Acceptance.
 - d. Statutory Declaration Certificate of Completion.
 - e. Worker's Compensation Clearance Certificate.
 - f. Trades' Certificates as appropriate.
3. The Consultant will verify that all items are correctly stated and ensure that completed documents and any supporting documents are given to the Project authority for processing.

5.1.19. Post Construction

1. The Contractor is responsible for correcting all defects in the work during the warranty period, except for damage caused by misuse, abuse or neglect by others including the building occupants.
2. The Project authority will promptly notify the Consultant in the event that defects or alleged defects appear in the work of the Contractor.
3. The Consultant will investigate all defects and alleged defects in the work promptly and issue appropriate instructions to the Contractor until all work is satisfactorily completed.

5.1.20. Human Remains, Archaeological Remains and Items of Historical or Scientific Interest

The Consultant will notify the Project authority immediately if such finds are discovered and obtain further instructions on action to be taken.

5.1.21. Hazardous Materials/Waste Abatement Monitoring

1. The Consultant will conduct site inspections during abatement as necessary to ensure appropriate abatement procedures are being followed, according to the specifications.
2. The Consultant's responsibilities will include ensuring that the containment area is properly set up.
3. The Consultant will inspect post remediation work areas to determine whether areas are suitably cleaned.

5.1.22. Risk management

The Consultant will assist the Project authority in:

1. identifying risk elements based on past experience, using a proposed checklist or other available lists
2. qualifying/quantifying probability of risk event and their impact on project or related work (low, medium, high)
3. applying a dollar value to all risk/probability impact events
4. preparing contingency plans for possible changes to the work, budget and schedule
5. prioritizing risk events (i.e. concentrate efforts on risk event with high probability and medium to high impact)
6. developing risk management plan (i.e. evaluate alternatives for mitigation of risks involved)
7. implement risk mitigation on items and approaches approved by the Project authority

5.1.23. Lines of Communication and Coordination

The Project authority is responsible for the project and is the liaison between the Consultant and the Client Department. The Consultant will:

1. Correspond only with the Project authority and not communicate directly with the Client department unless authorized in writing by the Project authority. If so authorized, the Consultant will provide to the Project authority, a copy of any such correspondence and/or summary of discussions with the Client.
2. Ensure that all communications carry PROJECT AUTHORITY's Project Title, Project Number, File Number and name of person to whom correspondence is addressed.
3. Advise the Project authority of any changes that may affect schedule or budget, or are inconsistent with instructions or written approvals previously given or decisions previously agreed to.

4. Detail the extent and reasons for the changes and obtain confirmation in writing as soon as feasible.

During Site Supervision and Construction Contract Administration Services, the Consultant will provide to the Project authority the following:

1. A copy of any correspondence and/or summary of discussions with the Contractor.
2. During all phases of project delivery, the Consultant will:
 - a. Coordinate and assume responsibility for the work of any and all Sub-Consultants and Specialists Consultants retained by the Consultant.
 - b. Ensure clear, accurate and ongoing timely and responsive communication of concept, budget, and scheduling issues.
 - c. Ensure adequate inspection services and provide answers to all Contractors' questions in a timely and responsive manner.

5.1.24. PROJECT AUTHORITY Quality Assurance Reviews

1. The Project authority may conduct Quality Assurance Reviews on reports, drawings, schedules, and costs estimates prepared by the Consultant, in a manner and at stages noted herein. The Consultant will respond in writing to PROJECT AUTHORITY's comments, in a timely manner and will be held accountable for delays if proper and timely responses do not occur.
2. Such reviews are not intended as a check against errors or omissions contained within the documents submitted. The Consultant is responsible for any such errors or omissions, regardless of any review by PROJECT AUTHORITY.
3. While the Project Authority acknowledges the Consultant's obligations to meet project requirements, the project delivery process entitles Project Authority to review the work. Project Authority reserves the right to reject undesirable or unsatisfactory work. The Consultant will obtain the Project authority's acceptances during each of the project stages.
4. Acceptances indicate that, based on a general review of material for specific issues, the material is considered to comply with governmental and departmental objectives and practices and that overall project objectives should be satisfied. The acceptance does not relieve the Consultant of professional responsibility for the work and compliance with the terms and conditions of the Contract.
5. The Project authority acceptances do not preclude the possibility that the work may be determined to be unsatisfactory at later stages of review (e.g. there may be more than one (1) draft version of a report required).
6. Acceptances by the Client and other agencies and levels of government will be obtained to supplement the Project authority acceptances. The Consultant will assist the Project authority in securing all such acceptances and adjust all documentation as required by such authorities when securing acceptance.

5.2. Codes and Standards

1. All criteria will be in accordance with the current edition of Canadian Codes and Standards, and, any other relevant Codes as applicable. If territorial, local or municipal codes and bylaws are more stringent, they will take precedence.
2. Regulations, by-laws, and decisions of "Authorities having jurisdiction" will be observed. In cases of overlap, the most stringent will apply.
3. The Consultant will identify and communicate with all jurisdictions applicable to the project.
4. For material properties (both physical and chemical), methods of fabrication, tests, etc., reference should be made to the latest editions of CSA Standards and the Canadian General Standards Board, or to local standards if they are more stringent.

6. Assumptions for Consultant Proposal

The following assumptions will be used by the Consultant for the development of the Financial Proposal:

1. Contractor Schedule and CAT Train path provided in Appendix F Assumed Contractor Schedule and CAT Train
2. ~~Provisional cost sum of \$200,000 for laboratory analysis of confirmation samples.~~
3. Consultant Inspection of Mobilization and Demobilization Activities:
 - a. Conduct four (4) onsite inspection of the Contractor Mobilization and Demobilization Activities:
 - i. At the completion of the Contractor Mobilization Sea Lift activities while the contractor is still onsite.
 - ii. During the Contractor Mobilization CAT Train Operations
 - iii. At the completion of the Demobilization Sea Lift loading activities while the contractor is still onsite.
 - iv. During the Contractor Demobilization CAT Train Operations
 - b. Assume Consultant costs to Repulse Bay for all inspections.
4. ~~Consultant Confirmation of Contaminated Soil Extents~~
 - a. ~~The consultant is required to provide personnel to assess, sample and confirm the extents (vertically and horizontally) of the identified contaminated soil on site.~~
 - b. ~~Assume seven (7) full working days for this activity~~
 - c. ~~Contractor will provide Tracked Excavator and Operator to Consultant during this activity.~~

The Consultant financial proposal may be updated based on the actual Contractor Work Plan and Schedule as agreed upon by the Consultant and Project Authority.