

Land and Water Boards of the Mackenzie Valley



LAND USE PERMIT APPLICATION FORM

Subsection 19(2) and Schedule 2 of the [Mackenzie Valley Land Use Regulations](#)

| | | | | |
|--|--|-------------------------------------|--------------------------------|--|
| Use an "X" to indicate which Board the Application is being made to: | Mackenzie Valley Land and Water Board: | <input checked="" type="checkbox"/> | Sahtu Land and Water Board: | |
| | Wek'èezhii Land and Water Board: | | Gwich'in Land and Water Board: | |

To complete this Form, please refer to the MVLWB [Guide to the Land Use Permitting Process](#) (Guide) and fill in the grey fields; attach additional pages, as necessary. Indicate N/A in the grey fields for Items or parts of Items that are not applicable. Review the following MVLWB guidance for formatting your Application Package:

- [Document Submission Standards](#)
- [Standard Outline for Management Plans](#)



Received: October 9, 2024

File #: MV2024S0032

Copied to: TT /Registry

| | | | |
|--|--|--|--|
| If applicable, provide the existing or current Land Use Permit file number: | New Land Use Permit Application | | |
| Use an "X" to indicate if this Application is accompanied by an Application for a Water Licence: | Water Licence – in a non-federal area: | | |
| | Water Licence – in a federal area: | | |

1. NAME AND CONTACT INFORMATION – APPLICANT

| | | | |
|-------------------|---|-------------|--|
| Applicant's Name: | Cesar Concepcion | | |
| Position: | South Slave Regional Manager, Projects, GNWT Department of Infrastructure | | |
| Mailing Address: | 9706 – 100 Street, P.O. Box 86 | | |
| Community: | Fort Simpson | Telephone: | 867-872-8354 |
| Prov/Terr: | Northwest Territories | Email: | cesar_concepcion@gov.nt.ca |
| Postal Code: | X0E 0N0 | Other: Cell | |

2. NAME AND CONTACT INFORMATION – APPLICANT'S HEAD OFFICE

Include a Certificate of Corporate Registration from the Government of the Northwest Territories in your Application Package.

| | | | |
|---|--|------------|----------|
| Use an "X" to indicate if this information is the same as Item 1 above: | | | X |
| Name: | | | |
| Position: | | | |
| Mailing Address: | | | |
| Community: | | | |
| Prov/Terr: | | Telephone: | |
| Postal Code: | | Email: | |
| Field Supervisor: | | Other: | |

3. NAME AND CONTACT INFORMATION – CONTRACTORS AND SUB-CONTRACTORS

Include relevant names, responsibilities, and contact information. An additional table should be added for each contractor and sub-contractor.

| | | | |
|------------------|--------------------------------------|------------|--|
| Name: | Rob Girvan. P.Eng. | | |
| Position: | Manager – Yellowknife Arctic Group | | |
| Company Name: | Tetra Tech Canada Inc. | | |
| Mailing Address: | P.O. Box 2244, Unit 201, 4916-49 St. | | |
| Community: | Yellowknife | Telephone: | 1 (867) 675-0252 / Mobile +1 (867) 444-0657 |
| Prov/Terr: | Northwest Territories | Email: | Rob.Girvan@tetrattech.com |
| Postal Code: | X1A 2P7 | Other: | Mobile +1 (867) 444-0657 |

| | | | |
|------------------|--|------------|--|
| Name: | Richard Hoos | | |
| Position: | Principal Consultant | | |
| Company Name: | Tetra Tech Canada Inc. | | |
| Mailing Address: | Suite 1000, 10th Floor, 885 Dunsmuir St. | | |
| Community: | Vancouver | Telephone: | 604-813-4952 |
| Prov/Terr: | British Columbia | Email: | Rick.Hoos@tetrattech.com |
| Postal Code: | V6C 1N5 | Other: | |

4. LOCATION OF ACTIVITIES

Use the grey fields below to provide or reference the following information:

Maps and Geographic Information System (GIS) Data: Include a map in your Application Package identifying local geographic features, watercourses and water sources, project structures, and location(s) of any proposed waste deposits. Provide geographic coordinates (latitude and longitude) of project features, and the maximum and minimum project boundary in degrees, minutes, seconds, or decimal degrees. Include GIS data in your Application Package, if applicable. Refer to the MVLWB [Guideline for Geographic Information Systems \(GIS\) Submission Standard](#) for providing geographic information.

| | | |
|--------------------------------------|--|--------------------------------------|
| Minimum latitude: N: 61.762413 | | Maximum latitude: N 61.763416 |
| Minimum longitude: W: -121.232386 | | Maximum longitude: W: -121.234076 |

NTS Map Sheet No.: Provide the map sheet number: 095H

Land Types: Use an “X” to indicate the type(s) of the land on which the activities are proposed:

| | | | | | | | |
|------------------------|--|---------------------------------------|--|---------------|----------|-----------------|--|
| Free Hold/ Private: | | Commissioner’s/ Territorial Lands: | | Federal Land: | X | Municipal Land: | |
|------------------------|--|---------------------------------------|--|---------------|----------|-----------------|--|

5. ELIGIBILITY

Refer to section 18 of the [Mackenzie Valley Land Use Regulations](#). Use an “X” to indicate which one applies:

| | | | | | | | |
|-----------|--|------------|--|-------------|--|--------|----------|
| 18(a)(i): | | 18(a)(ii): | | 18(a)(iii): | | 18(b): | X |
|-----------|--|------------|--|-------------|--|--------|----------|

6. RIGHTS AND/OR CONTRACTS TO SUPPORT ELIGIBILITY

Contact federal, territorial, and Indigenous governments and other parties to ensure all appropriate rights, authorizations, permissions, dispositions, and contracts have been obtained or are in the process of being obtained (e.g. mineral exploration rights, quarry permits, licences of occupation, leases, access agreements and authorizations, etc.). List and provide confirmation of other authorizations that relate to your activities; reference these in your Application Package (e.g. rights, permits, licences, etc.).

The project will also be applying for a City of Yellowknife Application to Occupy and Perform Geotechnical Testing on Municipal Land

7. PERMIT TYPE AND CRITERIA

Refer to sections 4 and 5 of the [Mackenzie Valley Land Use Regulations](#). Use an “X” to indicate which permitting criteria apply:

| Type A | | | Type B | | | Type C | | | |
|------------|--|------------|----------|------------|--|-----------|----------|-----------------------|--|
| 4(a)(i): | | 4(b)(i): | X | 5(a)(i): | | 5(b)(i): | X | (SLWB and WLWB only): | |
| 4(a)(ii): | | 4(b)(ii): | | 5(a)(ii): | | 5(b)(ii): | | | |
| 4(a)(iii): | | 4(b)(iii): | | 5(a)(iii): | | | | | |
| 4(a)(iv): | | 4(b)(iv): | | 5(a)(iv): | | | | | |
| 4(a)(v): | | | | 5(a)(v): | | | | | |
| | | | | 5(a)(vi): | | | | | |

8. PROJECT DESCRIPTION

Include your project description in your Application Package, or for small-scale projects, describe your proposed activities in the grey field provided below. Include the name and type (e.g., lake, river) of water source(s), and the purpose and quantity of water to be used (rates, volumes (m³/day)). Indicate the total number of hectares to be used in each phase of the project, as well as through the life of the project.

Tetra Tech has been retained by the Government of the Northwest Territories, Department of Infrastructure (GNWT-INF) to conduct a Geotechnical Assessment for the Fort Simpson Air Tanker Base Resurfacing Project..

Tetra Tech understands that the apron surface at the Fort Simpson Airport air tanker base needs to be repaired. In order to determine the best options for repairing the apron, a geotechnical investigation is required to determine the soil conditions and potential presence of permafrost beneath the apron. Once the subsurface conditions are known, a report with options for potential repair options along with Class C cost estimates can be provided.

Tetra Tech proposes to use Enviro -Tech Drilling Solutions (Enviro-Tech) out of Yellowknife to complete the drilling program. Four boreholes are planned, two to a depth of 10 m and two to 6 m to determine subsurface conditions beneath the apron. Tetra Tech will meet with airport officials to verify any buried utilities in the drilling area, and to confirm onsite working and communication protocols.

Boreholes will be drilled at the identified locations to the specified depths, or to refusal if encountered. The soils and ground ice encountered will be visually logged at the time of drilling in accordance with ASTM D2488, D4083-89 and the Guide to Field Description of Permafrost for Engineering Purposes (NRC 1963).

Samples will be collected at 1.5 m intervals, or at changes in stratigraphy, where warranted. A photographic log of the site investigation including photographs of the drill equipment and representative disturbed samples will be taken.

The boreholes will be backfilled with cuttings and/or gravel at completion. Borehole locations and elevations will be recorded with a handheld GPS device. The geotechnical drilling is expected to take place over two days. The details of the site investigation may be modified to suit site conditions.

Before mobilizing to the site, Tetra Tech will develop a project-specific safety plan, in consultation with the drilling contractor so that the safety features and any potential hazards of the equipment being used on the project are included in the Plan. The project will also have a community engagement plan, spill contingency plan and a waste management plan, all of which will be submitted to the MVLWB public registry for review and comment.

The details of the site investigation may be modified to suit site conditions.

9. CAMP

Describe the proposed camp size and layout. Indicate the number of person-days; explain, with rationale, any variations in the number of people that may be on site over the life of the project.

As the geotechnical drilling project will take place at the Fort Simpson Airport, no camp will be required.

10. ROADS AND ACCESSES

Provide detailed information about the construction, location, and decommissioning of any roads and accesses.

| | | | | | |
|---|-----|----------|--|-----|--|
| Use an "X" to indicate if this is to be a pioneered road or access: | Yes | | Use an "X" to indicate if the route has been laid out or ground-truthed: | Yes | |
| | No | X | | No | |

The proposed geotechnical program will take place on Lot Five dash Two (5-2) in Fort Simpson

11. PROPOSED WASTE MANAGEMENT METHODS

Use the grey fields below to provide or reference the following information:

Waste Management Plan: Include your Waste Management Plan in your Application Package, if applicable, or for small-scale projects, describe your proposed waste management activities in the grey fields provided below. A template for the Plan can be found in the MVLWB.

| Waste Type | Management Method(s) |
|---|---|
| Garbage: | All daily site garbage generated by the Project personnel will be placed in garbage bins at Fort Simpson Airport, for eventual transfer to the Fort Simpson Landfill as part of the Airport's normal practice. The garbage is anticipated to consist of food scraps and associated packing waste. |
| Sewage (Sanitary and greywater): | The drill crew members will use the Airport's public washrooms as needed |
| Brush and trees: | No trees or vegetation will need to be removed for the geotechnical drilling program. |
| Overburden (Organic soils, waste material, etc.): | the Geotechnical drilling program will be conducted with track-mounted drilling equipment. No overburden or organic soils will need to be removed. The boreholes will be backfilled with drill cuttings. upon completion, no further restoration is anticipated to be required. |

A copy of the drilling project's Waste Management Plan is provided with the project application

12. EQUIPMENT

Identify the types of equipment proposed to be used.

See the detailed equipment list in the Project Description. A summary of the larger equipment required is provided as follows

| Number | Type/Description | Size (weight in tonnes) | Proposed use |
|--------|--|-------------------------|-------------------|
| 1 | Track mounted D-50 auger drill operated by EnviroTech Drilling Solutions Ltd | ~ 5 | Augering/drilling |

13. FUEL

Identify all fuel types proposed to be used.

| Type of Fuel | Number of containers | Capacity of containers (e.g., litres, pounds) | Type of container (barrel, tank, tidy-tank) | Proposed storage or staging location(s) |
|--------------|----------------------|---|---|---|
| Diesel: | 1 | 100 L Fuel tank | Built in fuel tank | Installed in mobile equipment |

14. METHODS OF FUEL TRANSFER

Describe the proposed methods to transfer fuel.

No fuel transfers will occur during the drilling program.

15. SPILL CONTINGENCY PLAN

Include your Spill Contingency Plan in your Application Package, if applicable, or for small-scale projects, provide relevant details in the grey field provided below. An example of this Plan can be found in the INAC [Guidelines for Spill Contingency Planning](#).

The Project Spill Contingency Plan is provided with the Application Package

16. PROPOSED PROJECT SCHEDULE AND TERM

Indicate the proposed project start and completion dates and the time of year the project activities are planned to occur. Describe any anticipated temporary closure(s) or seasonal shutdowns. Indicate the term requested.

| | | | |
|---|----------------------------|------------------|----------------|
| Start Date: | ~November – December, 2024 | Completion Date: | ~December 2024 |
| The proposed 2024 drilling program will be undertaken following receipt of the required MVLWB Land use permit, anticipated to be received in November, 2024 | | | |
| Term of Permit Requested: | two(2) years | | |

17. POTENTIAL ENVIRONMENTAL IMPACTS OF THE PROJECT AND PROPOSED MITIGATIONS

Using the Impact-Mitigation Table below, or the more detailed Table in Appendix D of the [Guide](#), identify all potential impacts and possible mitigations that are relevant to the proposed project, and indicate whether any of the mitigation measures have been developed as a result of input from affected parties. Possible potential impacts are listed below; however, these lists are not exhaustive and may not apply to all projects. All information provided should reflect the size, scale, and nature of the proposed project. Cumulative impacts and climate change must be considered. Attach additional pages if needed.

| Potential Impacts <i>Use an "X" to indicate which apply</i> | X | Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i> |
|---|----------|---|
| ABIOTIC COMPONENTS | | |
| Land | | |
| Soil contamination | X | Potential soil contamination could occur due to a hydrocarbon spill. Any such spills will be immediately contained and cleaned up as per the Project Spill Contingency Plan |
| Soil compaction | | Use of tracked equipment will minimize soil compaction |
| Destabilization/erosion | | Not applicable |
| Change in soil structure | | Not applicable |
| Inability to support vegetation | | Not applicable |
| Other | | Not applicable |
| Water | | |
| Groundwater | | |
| Water table alteration | | Not applicable |
| Infiltration changes | | Not applicable |
| Changes in water quality | | Not applicable |
| Temperature changes | | Not applicable |
| Other | | Not applicable |
| Permafrost | | |
| Loss or change in extent | X | Permafrost degradation is not anticipated but will be avoided by following best management practices (e.g. drill holes will be backfilled with the drill cuttings) |
| Changes in seasonal fluctuations | | Not applicable |
| Change in persistence | | Not applicable |
| Other | | Not applicable |
| Surface Water | | |
| Water flow or level changes (permanent, temporary, seasonal) | | Not applicable |
| Drainage pattern changes | | Not applicable |
| Temperature changes | | Not applicable |
| Changes in water quality | | Not applicable |
| Wetland impairment | | Not applicable |
| Changes to aquatic habitat (see Biotic section below) | | Not applicable |
| Other | | Not applicable |
| Air | | |
| Changes in air quality | X | Temporary, localized air emissions from the drilling equipment. |
| Harm to living things | | Not applicable |
| Increased greenhouse gases | X | Minimal increase in greenhouse gases |
| Other | | Not applicable |
| BIOTIC COMPONENTS | | |
| Vegetation | | |
| Direct loss of vegetation | X | Not applicable |
| Loss of Species at Risk or may-be-at-risk plants | | Not applicable |

| Potential Impacts <i>Use an "X" to indicate which apply</i> | X | Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i> |
|---|----------|---|
| Change in species composition | | Not anticipated to occur |
| Introduction of non-native (invasive) species | | Not applicable |
| Effects on plant health (dust, metals, toxins) | | Not anticipated to occur |
| Increased risk of fire | | Not applicable |
| Compaction of vegetation | | Not anticipated to occur |
| Other | | Not applicable |
| Terrestrial Wildlife Habitat | | |
| Direct loss or removal of habitat, dens, or nests | | Not applicable |
| Loss or removal of keystone species and/or Species at Risk habitat | | Not applicable |
| Fragmentation of wildlife corridor | | Not applicable |
| Direct injury or mortality | | Not applicable |
| Disturbances to key lifecycle stages: breeding, feeding, nesting, staging | | Not applicable |
| Effects on population abundance | | Not applicable |
| Change in species diversity | | Not applicable |
| Effects on wildlife health (toxins, metals, etc.) | | Not applicable |
| Changes to migratory movement patterns | | Not applicable |
| Changes to predator-prey relationships | | Not applicable |
| Human-wildlife conflicts | | Not applicable |
| Other | | Not applicable |
| Aquatic Habitat | | |
| Breeding disturbances | | Not applicable |
| Change in species diversity | | Not applicable |
| Effects on health (toxins, metals, sediment, etc.) | | Not applicable |
| Changes to migratory movement patterns | | Not applicable |
| Changes to predator-prey relationships | | Not applicable |
| Effects on population abundance | | Not applicable |
| Change in species diversity | | Not applicable |
| Other | | Not applicable |
| CULTURAL COMPONENTS | | |
| Wildlife Harvesting | | |
| Loss or reduction in game species populations | | Not applicable |
| Effects on traditional land use, subsistence, and harvesting rights | | Not applicable |
| Other | | Not applicable |
| Cultural Integrity and Heritage Resources | | |
| Change to or loss of cultural integrity | | Not applicable |
| Change to or loss of traditional lifestyle | | Not applicable |
| Change to or loss of heritage resource | | Not applicable |
| Other | | |
| Social and Economic Well-being | | |
| Increased human health hazard and risk | | .Not anticipated to occur |

| Potential Impacts <i>Use an "X" to indicate which apply</i> | X | Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i> |
|---|----------|---|
| | | |
| Economic opportunities or losses (employment, training) | | Not applicable |
| Change in ecological, cultural, social, or economic values identified for protection in approved Land Use Plans | | Not applicable |
| Impairment of the recreational or traditional uses of the land or water | | Not applicable |
| Impairment of the aesthetic quality of the land or water | | Not applicable |
| Changes to the use of the area by other non-Indigenous people (e.g. trappers, outfitters, residents, hunters, forest harvesters, other authorized projects) | | Not applicable |
| Other | | No Project Impacts are anticipated to occur |

18. CLOSURE AND RECLAMATION

Use the grey field below to provide or reference the following information:

Closure and Reclamation Plan: Describe your plans for closure and reclamation, including any temporary closure(s) and seasonal shutdowns. Include your Closure and Reclamation Plan in your Application Package, if applicable, or for small-scale projects, describe the proposed activities in the grey field provided below. Please also refer to the MVLWB/AANDC [Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories](#).

Closure Cost Estimate: Prepare a Closure Cost Estimate and include it in your Application Package. Applicants are encouraged to contact the Board, prior to applying, to determine which closure-cost-estimate template is most suited to the activities being applied for. Guidance is provided in section 2.2 of the MVLWB/INAC/GNWT [Guidelines for Closure and Reclamation Cost Estimates for Mines](#). If your Application is submitted concurrently with a Water Licence Application, the estimate should include a breakdown of water- and land-related activities and liabilities.

A formal closure and reclamation plan will not be needed for this short-term geotechnical drilling program. Once the subsurface conditions are known, a report with options for potential repair options for the Fort Simpson Air Tanker Base Resurfacing Project, along with Class C cost estimates will be provided to GNWT-INF.

19. ADDITIONAL SUPPORTING INFORMATION

Use the grey field below to provide or reference the following information:

Engagement: Conduct engagement, prepare an Engagement Record and Engagement Plan in accordance with the MVLWB [Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits](#), and include them in your Application Package. Templates are provided in the Guidelines. Please also refer to [Information for Proponents on MVLWB's Engagement Requirements](#).

Land Use Plans: Contact the applicable Land Use Planning Board or the Tłı̨chǫ Government to discuss conformity with the relevant land use plan(s). Include a Land Use Plan Conformity Table in your Application Package, demonstrating how the project meets the requirements of the Land Use Plan, if applicable.

Traditional (Environmental) Knowledge (TEK/TK): Provision of TEK/TK is mandatory for applications to the SLWB. Other applicants are strongly encouraged to include TEK/TK.

Studies Undertaken to Date: List any relevant studies that support the proposed activities and include them in your Application Package.

Engagement with potentially affected parties has been conducted in accordance with the Project’s Engagement Plan. The Engagement Records obtained to date are summarized as an appendix to the Plan, which is provided as a supporting document to this Land Use Permit Application.


20. FEES

Refer to section 20 of the [Mackenzie Valley Land Use Regulations](#) for assistance in determining relevant fees.

| Type of Fee | Amount (\$) |
|---|-------------|
| Application fee: | 150 \$ |
| Land-use fees (for federal areas only): | \$ |
| Total Fees: | 150 \$ |

21. SIGNATURE

| | |
|-----------------------------------|--|
| Cesar Concepcion | South Slave Regional Manager, Projects |
| GNWT Department of Infrastructure | |

| | |
|---|-----------|
|  | 2024/10/3 |
| Signature | Date |

Please submit completed applications to the Regulatory Manager or Executive Director identified on the “Contact Us” pages of the respective Land and Water Board (www.mvlwb.com, www.wlwb.ca, www.slwb.com, www.glwb.com).