



Sahtu Land and Water Board

Staff Report

Division: Land Program	Report No. 1
Date Prepared: March 2, 2021	File No. S21S-001
Meeting Date: March 8, 2021	

Subject: Type A Land Use Permit Application submitted by GNWT- Dept. of Infrastructure (INF).
Project: Edie Lake Quarry Geotechnical Investigation

1. Purpose/Report Summary

The purpose of this Report is to present to the Sahtu Land and Water Board for consideration:

- a) **Application for Land Use Permit (LUP or Permit) S21S-001**, for geotechnical investigations at Edie Lake Quarry submitted by GNWT- INF;
- b) **the draft Preliminary Screening Report;**
- c) **the draft Terms and Conditions for the new Land Use Permit;**
- d) **Engagement Plan and Record;**
- e) **Spill Contingency Plan;**
- f) **Waste Management Plan;**
- g) **Permafrost and Erosion Management Plan.**

2. Background

Application Received: January 25, 2021
Application Deemed Complete: February 2, 2021
Application Forwarded for Review: February 2, 2021
Number of Review Agencies: 38
Review Period End Date: February 22, 2021
Proponent Response End Date: March 1, 2021
Board Meeting Date: March 8, 2021

The activities as described **trigger** a Type A Permit in accordance with paragraph 4(a)(ii) and 4(b)(i) of the MVLUR:

4 No person shall, without a Type A permit, carry on any activity that involves (a) on land outside the boundaries of a local government,

(ii) the use of a vehicle or machine of a weight equal to or exceeding 10 t, other than on a road or on a community landfill, quarry site or airport, (b) on land within or outside the boundaries of a local government,

(i) the use of motorized earth-drilling machinery the operating weight of which, excluding the weight of drill rods, stems, bits, pumps and other ancillary equipment, equals or exceeds 2.5t, for a purpose other than the drilling of holes for building piles or utility poles or the setting of explosives within the boundaries of the local government.

Eligibility and rights/contracts to support eligibility: The Applicant, GNWT-INF, is eligible to carry out the proposed activities on territorial lands.

INF has obtained a quarry permit (2020QP0001) and hold a land reserve (96E/7-59-2) in association with the proposed quarry area.

3. Project Overview

Government of the Northwest Territories-Department of Infrastructure (GNWT-INF) has submitted a complete application for a type-A land use permit (permit). The purpose of this Application is to conduct a geotechnical drilling program at the Edie Lake Quarry to determine material quality and quantity for the Prohibition Creek Access Road.

The geotechnical investigation will confirm bedrock extent of the existing quarry. The assessment program will include the advancement of boreholes using a pad-mounted core drill at five to seven selected sites within the existing quarry. Boreholes will be advanced to a maximum depth of 40 m and it is not anticipated that groundwater will be encountered. Previous development at the site did not identify any groundwater flow on the existing surface wall or pit. Artesian wells are not expected. No new clearing will be required for the program. The drilling sites are at an existing quarry which is accessible via a haul road which connects to the Mackenzie Valley Winter Road. For drilling locations outside the existing quarry, access trails have previously been cleared to reach these sites. These clearing activities were completed under the existing LUP S15E-004 (Canyon Creek All Season Access Road Construction Project). A 20m radius is expected to be cleared around each borehole. Overall, the disturbance associated with the Project will be less than 1 ha.

Water will be sourced from the Town of Norman Wells municipal water source and transported to site via water truck operated by HRN Contracting Ltd. Water withdrawal for the Project will be less than 100 m³ per day (approximately 20 m³ per day).

The Project will consist of the following components:

- Mobilizing and demobilizing drilling equipment to and from the Project work sites.
- Drilling of boreholes at the indicated sites.
- Sourcing water from the municipal water system for the completion of the drilling activities.

4. Sahtu Land Use Conformity

Projects proposed/conducted in the Sahtu Region must conform to the Sahtu land Use Plan (SLUP). The 19 Conformity Requirements (CRs) described in SLUP have been addressed by the PCAR Project is as follows:

- **CR #1** – Land Use Zoning: The Project is located in a general use zone (GUZ) and does not involve Bulk Water Removal.
- **CR #2** – Community Engagement and Traditional Knowledge: Meetings have been held with the public and IGOs to discuss issues related to the PCAR-related geotechnical activities and Edie Lake Quarry development. An Engagement Plan and Record is submitted with the Application.
- **CR #3** – Community Benefits: The Project will support the eventual construction and maintenance of the PCAR, which will provide community benefits in the form of greater economic opportunities.
- **CR #4** – Archaeological Sites and Burial Sites: It is not anticipated that archaeological sites will be encountered during the Project. AIAs conducted within the Project area did not indicate the presence of any archaeological sites. If, during the Project, archaeological sites or burial sites are identified, these areas will be avoided.
- **CR #5** – Watershed Management: Very minor amounts of water will be required for the Project. Water required will be sourced from Norman Wells and transported to the Project work sites. A Water Licence is not required.
- **CR #6** – Drinking Water: The Project will have little to no reasonable potential to contaminate surface or groundwater within community catchments.
- **CR#7** – Fish and Wildlife: Background information on fish and wildlife occurring in the project area is provided in the project description.
- **CR #8** – Species Introductions: Introduction of non-native species is not anticipated.
- **CR #9** – Sensitive Species and Features: The Project work sites are not within or near areas of concern identified in this conformity requirement.
- **CR #10** – Permafrost: Impacts to permafrost and ice rich soils associated with this Project are not anticipated. To minimize the risk of any potential impacts to the permafrost layer, the mitigations described Permafrost and Erosion Management Plan will be applied.
- **CR #11** – Project Specific Monitoring: INF intends to obtain a wildlife monitor from Norman Wells Renewable Resource Council to support the work.
- **CR #12** – Financial Security: The proponent for the Project is INF. Under the MVRMA, the territorial government is exempt from the collection of security.
- **CR #13** – Closure and Reclamation: Closure and reclamation activities associated within the Project will be limited to backfilling boreholes following drilling.
- **CR #14** – Protection of Special Values: As noted above, any identified archaeological sites will be avoided, impacts to water quality will be mitigated through design, and impacts to wildlife habitat will be minimized through design and construction practices.
- **CR #15-19**: Not applicable to this project

Board Staff notes that the project conforms with the SLUP.

5. Program Components

5.1 Management Plans

Management Plans submitted for the geotechnical investigation are: Engagement Plan, Spill Contingency Plan, Waste Management Plan and Permafrost and Erosion Management Plan.

5.1.1 The Spill Contingency Plan (SCP): SCP discusses that the contamination source is primarily diesel. Fuel transport is in tidy tanks. The external fuel tanks for the project will include tidy tanks mounted in the back of pick-up trucks with a capacity of 450 liters containing diesel for refueling mobile equipment and vehicles at the project sites. No stationary fuel storage tanks will be stored at project sites. This SCP provides information for a) contact information, b) general project details, c) list of potential contaminants and spill scenarios, d) roles of response organizations, e) emergency contact information, f) primary spill prevention measures, g) spill response action plan, h) reporting procedures, i) details of spill kit and other resource inventory, j) training agenda and public relations policy, k) MSDS sheets (as appendix 1), l) reportable spill quantities (as appendix 2), an incomplete spill form (as appendix 3) and m) information on fueling equipment (as appendix 4).

Board staff notes on SCP: SCP must be revised in accordance with *Guidelines for Spill Contingency Planning (Indian and Northern Affairs Canada, 2007)*. Revised SCP must include: a) spill response flowchart, b) NT-NU Spill Response Form, c) contact information from contractors (spill response team), d) update unit of weights in table 7-1, e) specific parking locations of pick-up trucks with fuel.

5.1.2 The Waste Management Plan (WMP) was prepared in accordance with *Guidelines for Developing a Waste management Plan (MVLWB 2011)*. It discusses the management of expected wastes from the project: a) Non-Hazardous (Domestic Waste, Sewage, animal carcasses if collisions occur) and b) Hazardous Waste (used hydrocarbon containers, adsorbents, contaminated snow/water, batteries). This WMP include a) general project details, b) classification and handling/disposal of waste types and c) management of waste types.

Board staff notes on WMP: WMP must be revised with a user-friendly table listing all anticipated waste, expected quantity, method of disposal and final disposal location. INF must specify how and where hazardous waste will be disposed of.

5.1.3 An Engagement Plan and Record was prepared as per *MVLWB's Engagement Requirements (as of 2013)*. The document has 2 parts viz. a) Engagement Plan and b) Engagement Record. Engagement Record is classified and recorded for each affected party including a) Fort Norman Metis Land Corporation, b) Hamlet of Tulita, c) Norman Wells Land Corporation, d) Town of Norman Wells, e) Tulita Dene Band and f) Tulita Land Corporation. Engagement was performed through e-mail distributions and written letters. The proponent is committed to ongoing engagement with local communities.

Board Staff notes: Engagement is satisfactory for this short project.

5.1.4 Permafrost and Erosion Management Plan (PEMP): The purpose of the Plan is to provide guidance and mitigation to avoid or prevent erosion, sedimentation and degradation of permafrost from activities related to project. The Plan was developed according to the Northern Land Use Guidelines and the INF's Erosion and Sediment Control Manual. The plan includes the following information: a) contact information for the project, b) project location maps, c) action plan with mitigation measures and post project monitoring, d) resource inventory and e) information for emergency contact.

Board staff notes on PEMP: The Plan is satisfactory for the scale and complexity of this project.

5.2 Other Reports and documents

5.2.1 Traditional Knowledge (TK) Study Report: TK Study was conducted for the Canyon Creek All Season Access Road (CCASAR) Construction Project in 2015. CCASAR Project included commissioning of Edie Lake Quarry. Hence the TK Study conducted in 2015 is relevant for the current geotechnical drilling project. No particular concerns were raised for the drilling activities within Edie Lake Quarry.

5.2.2 Project maps: The maps provide the 7 proposed drilling locations, boundaries of Edie lake Quarry and overall geographical area.

5.2.3 Archaeological Information: An Archaeological Impact Assessment (AIA) covering the entire Project area was conducted by Stantec Consulting in 2018. No previously recorded archaeological sites are located within 5 km of the quarry development area. Areas of archaeological potential were confirmed in the field and tested but no archaeological resources were identified. It is not anticipated that any archaeological resources will sustain impact within proposed quarry expansion area provided that its boundaries are not modified to include unassessed areas.

It is not anticipated that archaeological sites will be encountered during the Project. AIAs conducted within the Project area did not indicate the presence of any archaeological sites. If, during the Project, archaeological sites or burial sites are identified, these areas will be avoided.

5.2.4: Other documents: a) Support Letter from Town of Norman Wells and b) Correspondence - approval for waste disposal at Norman Wells community waste disposal facilities (domestic waste and sewage waste).

5.3 Equipment List for Geotechnical Investigation Project

The following equipment is identified as required for the geotechnical investigation project

- Geotechnical drill rigs of various sizes
- Loader IT-28/966 or similar
- Dozer D6
- Service Pickup 0.5 to 5 tonne capacity
- Water trucks
- Portable diesel and gas generators

5.4 Fees

No Application fee was required as it was from the Territorial Government.

5.5 Term

GNWT-INF has applied for a term of five years.

Although the project will be carried out over a period of one week in the winter/spring of 2021 period of 5 years is to accommodate unforeseen delays.

6. Public Review of the Applications

Of the 38 organizations (distribution list for Tulita district) to which the application was distributed, 24 are represented within the Sahtu Settlement Area.

No review comments were received.

7. Preliminary Screening

Under the Preliminary Screening Requirements of section 124(1) of the *Mackenzie Valley Resource Management Act* (MVRMA), the Board must conduct a preliminary screening of any proposed development prior to the issuance of a Licence, Permit, or Authorization, unless it is exempt from Part 5 of the MVRMA.

Preliminary Screening Report was prepared by Board Staff. The report concludes that the environmental impact of the proposed project can be mitigated with known technologies and no significant public concerns have been raised. The Draft Preliminary Environmental Screening Report and letter to MVEIRB is attached with this report.

8. Conclusion

The Preliminary Environmental Screening Report did not identify any Significant Adverse Environmental Impacts or Public Concerns with the proposed project. All potential environmental impacts can be mitigated with known technology and have been addressed in the Terms and Conditions of the Land Use Permit.

A draft land use permit has been prepared based upon the standard conditions. Board staff conclude that the conditions contained within this draft Permit should mitigate the potential environmental impacts this development may have on the land and water.

A draft Land Use Permit Term and Conditions, draft Land Use Permit cover page, Reasons for Decision and Decision Letter are attached.

9. Recommendations

Board staff recommend the Board proceed with the regulatory process for this Land Use Permit including:

- 1) Make a motion to approve the **Preliminary Screening Determination with cover letter to MVEIRB;**
- 2) Make a motion to approve the **Land Use Permit**, with a term of five years.
- 3) Make a motion to approve the **Engagement Plan and Record;**
- 4) Make a motion to approve the **Spill Contingency Plan** as required by Land Use Permit S12S-001 as an interim submission. GNWT-INF is required to submit a revised submission a minimum of 60 days prior to commencement of activities in accordance with comments and recommendations made during this review, for confirmation of conformity from Board staff (ref: section 5.1.1 of this report).

- 5) Make a motion to approve the **Waste Management Plan** as required by Land Use Permit S12S-001 as an interim submission. GNWT-INF is required to submit a revised submission a minimum of 60 days prior to commencement of activities in accordance with comments and recommendations made during this review, for confirmation of conformity from Board staff (ref: section 5.1.2 of this report).
- 6) Make a motion to approve the **Permafrost and Erosion Management Plan**;
- 7) Make a motion to approve the **Reasons for Decision** and **Decision Letter** prepared for Board consideration.

(If approved, the land use permit may be issued after the 10-day pause period after Preliminary Screening Determination).

10. Attachments

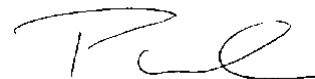
- 10.1. Application for Land Use Permit S21S-001 ([hyperlink](#) only)
- 10.2 Project Description Report ([hyperlink](#) only)
- 10.3 Project Maps ([hyperlink](#) only)
- 10.4 Other application documents:
 - 10.4.1 Archaeological Information ([hyperlink](#) only)
 - 10.4.2 Project Support Letter ([hyperlink](#) only)
 - 10.4.3 Traditional Knowledge Information ([hyperlink](#) only)
 - 10.4.4 Correspondence - approval for waste disposal at Norman Wells landfill ([hyperlink](#) only)
- 10.5 Review Comment Table
- 10.6 Engagement Plan and Record
- 10.7 Spill Contingency Plan - excluding MSDS sheets
 - 10.7.1 Spill Contingency Plan ([hyperlink](#) only)
- 10.8 Waste Management Plan
- 10.9 Permafrost and Erosion Management Plan
- 10.10 SLWB Preliminary Screening Determination with cover letter to MVEIRB
- 10.11 Draft Land Use Permit Terms and Conditions
- 10.12 Draft Land Use Permit Cover Page
- 10.13 Draft Reasons for Decision
- 10.14 Draft Decision Letter

Respectfully submitted,



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Executive Director Comments:



Paul Dixon
Executive Director