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December 16, 2019

File: S19S-005

Mr. Mark Cliffe-Phillips
Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
Box 938, 5102-50th Avenue
Yellowknife, NT X1A 2N7

Sent by email

Dear Mr. Cliffe-Phillips,

Re: Notice of Preliminary Screening Determination – Application for Land Use Permit – Geotechnical Drilling Program for Colville Lake School Replacement Sites, Sahtu Region, NT

The Sahtu Land and Water Board (Board) met on December 16, 2019 and considered the Application from Government of the Northwest Territories – Department of Infrastructure (GNWT-INF) for Type A Land Use Permit (Permit) S19S-005 for the Geotechnical Investigation of proposed Colville Lake School replacement sites in accordance with the *Mackenzie Valley Resource Management Act* (MVRMA).

The Board reviewed the preliminary screening based on the public record for the proceeding. Based on the evidence provided, the Board is satisfied the screening has been completed according to section 125(2)(a) of the MVRMA and has decided not to refer the project to environmental assessment. The Board's reasons for decision, as required by section 121 of the MVRMA, are attached.

If the Board does not receive notice of referral to environmental assessment, it can proceed with issuance of Permit S19S-005 on Friday, December 27, 2019.

Our Board and staff look forward to continued communications throughout the pause period. If you have any questions or concerns regarding this letter, please contact Paul Dixon at (867) 598-2413 ext. 225 or email at Paul.dixon@slwb.com.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Larry Wallace".

Larry Wallace
Chair, Sahtu Land and Water Board

Copied to: K'asho Got'Ine Distribution Lists

Saifuddin Quazi, GNWT-INF
Robin Ferguson, GNWT-INF
Rick Hoos, Tetra Tech Canada Inc.

Attached: Preliminary Screening and Reasons for Decision

PRELIMINARY SCREENING REPORT FORM

<p>PRELIMINARY SCREENER: Bonnie Bergsma, Regulatory Specialist</p> <p>ORGANIZATION: Sahtu Land and Water Board</p> <p>REFERENCE / FILE NUMBER: S19S-005</p> <p>TITLE: Geotechnical Drilling Program Colville Lake, NT</p> <p>APPLICANT: GNWT – Department of Infrastructure.</p> <p>MEETING DATE: December 16, 2019</p>	<p>EIRB REFERENCE NUMBER:</p>
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Type of Development: (S) Geotechnical

- Type of Development:**
- New Development
 - Amend, EIRB Ref. #
 - Renew, EIRB Ref. #
 - Requires permit, licence or authorization
 - Does not require permit, licence or authorization

Project Summary: Environmental Site Assessment (ESA) and Geotechnical field investigation within the municipal boundaries of Colville Lake, NT to assess the engineering properties (strength and settlement behaviour) of the soil for construction of a new School.

Scope: Drilling operations will be limited to the footprint of three proposed sites on previously disturbed land. No new access is anticipated. The field program will be conducted during February to March 2020 using an AR80 track-mounted rotary/auger drill rig owned and operated by Mobile Augers & Research Ltd., of Edmonton, Alberta.

The drilling program is expected to be carried out as follows:

- Drilling of seven (7) boreholes at Site A1 or A2, and four (4) boreholes at Site C. One borehole per site will be advanced to 18 m or refusal and the other boreholes will be advanced to 12 m, or refusal, whichever is shallowest. The number and depth of boreholes may be adjusted by Tetra Tech, in consultation with GNWT Infrastructure;
- Log the soil and ground ice conditions encountered at the time of drilling following approved methods, standards and classification systems;
- Record borehole locations with a hand-held GPS;
- Collect disturbed soil samples at 1.5 m intervals, and at changes in stratigraphy;
- Conduct Standard Penetration Tests (SPT's) at selected intervals, if unfrozen soil is encountered install ground temperature cables within PVC pipe in selected boreholes to measure ground temperatures;
- Backfill boreholes with drill cuttings and granular fill material upon completion;
- Conduct laboratory testing on select samples collected at Site A1 or A2, for the purposes of soil classification and determination of engineering properties.

Principal Activities (related to scoping)

- Construction
- Installation (of thermistors to record/monitor permafrost)
- Maintenance
- Expansion
- Operation (re-suspension)
- Repair
- Water Intake
- Other: Geotechnical Drilling
- Exploration
- Industrial
- Recreation
- Municipal
- Quarry
- Linear / Corridor
- Sewage
- Decommissioning
- Abandonment
- Aerial
- Harvesting
- Camp
- Scientific / Research
- Solid Waste

Principal Development Components (related to scoping)

- Access Road
 - construction
 - abandonment/removal
 - modification e.g., widening, straightening
- Automobile, Aircraft or Vessel Movement
- Blasting
- Building
- Burning
- Burying
- Channeling
- Cut and Fill
- Cutting of Trees or Removal of Vegetation
- Dams and Impoundments
 - construction
 - abandonment/removal
 - modification
- Ditch Construction
- Drainage Alteration
- Drilling other than Geoscientific
- Ecological Surveys
- Excavation
- Explosive Storage
- Fuel Storage, drilling fluid, and hydraulic fracture fluid storage
- Topsoil, Overburden or Soil
 - fill
 - disposal
 - removal
 - storage
- Waste Management
 - disposal of hazardous waste
 - waste generation
 - drilling wastes
- Sewage
 - disposal of sewage
- Geoscientific Sampling
 - trenching
 - diamond drill
 - borehole core sampling
- Bulk soil sampling
- Gravel
- Hydrological Testing
- Site Restoration
 - fertilization
 - grubbing
 - planting/seeding
 - reforestation
 - scarify
 - spraying
 - recontouring – boreholes are backfilled
- Slashing and removal of vegetation
- Soil Testing
- Stream Crossing/Bridging
- Tunneling/Underground
- Water Intake
- Other

NTS Topographic Map Sheet Numbers
096MO1

Latitude/Longitude and UTM System:

Minimum Latitude: Centre of Site A1 - 67°02'01.48" N
Centre of Site A2 - 67°02'29.58" N
Centre of Site C - 67°02'18.22" N
Minimum Longitude: Centre of Site A1 - 126°05'22.65" W
Centre of Site A2 - 126°09'84" W
Centre of Site C - 126°05'22.34" W

Nearest Community and Water Body: Colville Lake, Colville Lake

Land Status (*consultation information*)

Free Hold / Private Commissioner's Land Federal Crown Land Municipal Land

Transboundary Implications

British Columbia Alberta Saskatchewan Yukon
 Nunavut Wood Buffalo National Park Inuvialuit Settlement Region

N/A

Type of Transboundary Implication: Impact / Effect Development

Public Concern

N/A

PHYSICAL - CHEMICAL EFFECTS

IMPACT

MITIGATION

1. Groundwater

Water table alteration

Drilling could intercept the water table and encounter a flowing artesian well. Mitigation includes:
1. Adding a standard Condition in the permit that requires the Permittee to a) plug the Borehole in such a manner as to permanently prevent any further outflow of water; and (b) immediately report the occurrence to the Board and an Inspector.

Water quality changes

If fuel spills it may migrate into groundwater. Mitigation includes:
1. A Spill Contingency Plan has been developed in accordance with INAC's Guidelines for Spill Contingency Planning.
2. Standard spill kits will be located wherever fuel is used.
3. Portable drip pans will be used when equipment is stationary to avoid any leaks/drips on the land.
4. If a reportable spill occurs, it will be reported to the NWT 24-Hour Spill Report Line at (867) 920-8130 or spills@gov.nt.ca and GNWT Lands Inspector 867-587-7206.

Infiltration changes

None anticipated as the project will take place during winter frozen conditions. Any spills will be confined to the snow and ice layer.

Other:

N/A

IMPACT

MITIGATION

1. Surface Water

Water flow or level changes

Water quality changes

The project is not expected to have a significant impact on waterbodies in the area as the location of the project is within the municipal boundary of Colville Lake and located greater than 100 m from the nearest water body (Colville Lake). Mitigation measures include:

1. Drilling personnel and supervisory staff are trained in spill prevention

- and response, in accordance with the SCP.
2. Only use well maintained equipment and vehicles (i.e., free of leaks)
 3. Routinely inspect vehicles and equipment for leaks; repair any leaks immediately and use drip trays when equipment is stationary.
 4. Refuelling will occur at local fuel station.
 5. Spill kits will be available on-site.

- Water quantity changes
- Drainage pattern changes
- Temperature
- Wetland changes / loss
- Other:
- N/A

IMPACT

MITIGATION

2. Noise

- Noise increase

1. Short-term, temporary noise-related impacts will occur during borehole. There is no mitigation for noise during drilling. As any increase in noise disturbance from undertaking will be temporary and localized in nature, there are no anticipated long term effects.

- Noise in/near water
- Other:
- N/A

IMPACT

MITIGATION

3. Land

- Geologic structure changes

- Soil contamination

Soil contamination is possible in the event of a spill; however, the potential is low due to work being completed in the winter under frozen conditions. Mitigation of spills includes:

1. Implementation of the Spill Contingency Plan.
2. Standard spill kits will be located wherever fuel is used.
3. Portable drip pans will be used under stationary equipment.
4. If a spill occurs, it will be reported to the NWT 24-Hour Spill Report Line at (867) 920-8130 or spills@gov.nt.ca and GNWT Lands Inspector at 867-587-7206 and the community SAO.

- Ground disturbance

There are vibrations associated with borehole drilling. All drilling will occur on previously disturbed land and therefore potential impacts are low. Mitigation includes:

1. Implement ground disturbance protocols where required.

- Buffer zone loss
- Soil compaction & settling

Destabilization / erosion

The drilling will occur during winter under frozen conditions on flat land and therefore the potential for erosion issues is minimal. In the event there are erosion issues mitigation includes:

1. Adding a standard condition to the permit for installing and maintaining progressive erosion control measures where required.

Permafrost regime alteration

The project requires drilling in area of continuous permafrost .Mitigation includes :

1. Backfilling of all bore holes once the work has been completed.
2. Placing thermistors into designated holes to monitor and record the permafrost.

Other:

N/A

IMPACT

MITIGATION

4. Non Renewable Natural Resources

Resource depletion

1. Equipment and vehicles using fossil fuels will be utilized in the most efficient manner possible in order to minimize program fossil fuel requirements.

Other

N/A

IMPACT

MITIGATION

5. Air / Climate / Atmosphere

Greenhouse gases

1. Vehicles and equipment, using fossil fuels, emit substances that contribute to air pollution and global warming. The cumulative effects of these activities are an unavoidable impact of fossil fuel usage.

BIOLOGICAL ENVIRONMENT

IMPACT

MITIGATION

1. Vegetation

Species composition

Species introduction

Toxin / heavy accumulation

Loss of timber along seismic lines

✓ Damage to ground vegetation and permafrost

The project requires drilling in area of continuous permafrost .

Mitigation measures include:

1. Backfilling of all bore holes once the work has been completed.
2. Placing thermistors into designated holes to monitor and record the permafrost.

○ Increased fire hazard

○ N/A

IMPACT

MITIGATION

2. Wildlife & Fish

✓ Effects on rare, threatened or endangered species

The Project is located within the community of Colville Lake and therefore the risk to wildlife is minimal. The project overlaps with the ranges of the following NWT-listed and /or pre-listed species: Grizzly Bear – Listed as Threatened; Boreal Caribou – Listed as Threatened; Barren-ground Caribou – Listed as Threatened

1. Although the project overlaps with the range(s) of the species listed above, ENR is of the opinion that the scope, areal extent, scale and/or timing of the proposed project are such that the likelihood of significant negative impacts to NWT-listed or pre-listed species at risk is minimal.
2. Mitigation includes adding a Permit condition to cease project activity if caribou come within 500 m of the project site.
3. Proper waste management practices to minimize the attraction of wildlife to waste produced by the Project.
4. Adherence to best practices for wildlife management recommended by GNWT-ENR.

○ Fish population changes

○ Waterfowl population

○ Breeding disturbances

✓ Population reduction

1. Site and project speed limits will be adhered to, to minimize the probability of collisions with other vehicles, wildlife, or other objects

○ Species diversity change

✓ Health changes (identify)

1. Spills of fuel could be harmful to wildlife.
2. All spills will be cleaned up according to the Spill Contingency Plan.

✓ Behavioral changes (identify)

1. Site and project speed limits will be adhered to, to minimize the probability of collisions with other vehicles, wildlife, or other objects
2. Wildlife will not be fed or disturbed; sightings will be reported per the recommendations of GNWT-ENR and reported to Environmental Protection Division of GNWT (Sahtu Region) at 867-587-3500.

○ Habitat changes / effects

○ Game species effects

○ Toxins / heavy metals

○ Forestry changes

○ Agricultural changes

Other:

N/A

INTERACTING ENVIRONMENT

1. Habitat & Communities

Predator-prey

Wildlife habitat / ecosystem composition changes

While there is little likelihood of impacts to wildlife or wildlife habitat from this project, a standard condition is included in Permit to ensure the Permittee will take all reasonable measures to prevent damage to wildlife and fish Habitat during this land-use operation.

Reduction / removal of keystone or endangered species

Removal of wildlife corridor or buffer zone

Other: Canadian Important Bird Areas

1. Social & Economic

Planning / zoning changes or conflicts

Rental house

Airport operations / capacity changes

Human health hazard

Impair the recreational use of water or aesthetic quality

Affect water use for other purposes

Affect other land use operations

Quality of life changes

Public concern

Other: Social and Economic

There is a potential benefit of the project to consider local employment opportunities

N/A

1. Cultural & Heritage

Affects to historic property

Increased economic pressure

Changes to or loss of historic resources

Changes to or loss of archeological resources

Increased pressure on archeological resources

Effects to aboriginal lifestyle

Other:

If any archaeological artifacts are discovered there are standard conditions in the Permit for site discovery and notification to PWNHC.

PRELIMINARY SCREENER / REFERRING BODY INFORMATION
(CHECK ALL THAT APPLY)

	RA or DRA	ADVISE	PERMIT REQUIRED
Federal			
ATOMIC ENERGY CONTROL BOARD	○	○	○
CANADIAN HERITAGE	○	○	○
CANADIAN TRANSPORTATION AGENCY	○	○	○
ENVIRONMENT AND CLIMATE CHANGE CANADA	○	✓	○
FISHERIES & OCEANS	○	✓	○
ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA	○	✓	○
CANADIAN NORTHERN ECONOMIC DEVELOPMENT AGENCY – NWT REGION	○	✓	○
INDUSTRY CANADA	○	○	○
NATIONAL DEFENSE	○	○	○
NATIONAL ENERGY BOARD	○	○	○
NATURAL RESOURCES	○	○	○
PUBLIC WORKS & GOVERNMENT SERVICES	○	○	○
TRANSPORT CANADA	○	✓	○
CANADIAN NUCLEAR SAFETY COMMISSION	○	○	○
Territorial			
MUNICIPAL & COMMUNITY AFFAIRS	○	✓	○
EDUCATION, CULTURE AND EMPLOYMENT	○	✓	○
ENVIRONMENT & NATURAL RESOURCES	○	✓	○
INFRASTRUCTURE	○	✓	○
DEPARTMENT OF HEALTH AND SOCIAL SERVICES	○	✓	○
PRINCE OF WALES NORTHERN HERITAGE CENTRE	○	✓	○
INDUSTRY, TOURISM AND INVESTMENT	○	✓	○
LANDS	○	✓	○
OFFICE OF THE REGULATOR OF OIL AND GAS OPERATIONS	○	✓	○
Boards			
GWICH'IN LAND & WATER BOARD	○	○	○
SAHTU LAND & WATER BOARD	✓	○	✓
MACKENZIE VALLEY LAND & WATER BOARD	○	✓	○
MACKENZIE VALLEY ENVIR. IMPACT REVIEW BOARD	○	✓	○
SAHTU LAND USE PLANNING BOARD	○	✓	○
SAHTU RENEWABLE RESOURCES BOARD	○	✓	○
SAHTU HEALTH BOARD	○	✓	○
Aboriginal / First Nation			
SAHTU SECRETARIAT INCORPORATED	○	✓	○
YAMOGA LAND CORPORATION	○	✓	○
FORT GOOD HOPE RENEWABLE RESOURCES COUNCIL	○	✓	○
K'ASHO GOT'INE DISTRICT LAND CORPORATION	○	✓	○
FORT GOOD HOPE METIS NATION	○	✓	○
FORT GOOD HOPE CHARTER COMMUNITY COUNCIL	○	✓	○
AYONI KEH LAND CORPORATION	○	✓	○
Local Government			
BEHDZI ADHA FIRST NATION BAND	○	✓	○
Communities			
Colville Lake			

REASONS FOR DECISION

The Sahtu Land and Water Board (the Board) met on December 16, 2019 to consider the land use permit (Permit) application S19S-005 from the Government of the Northwest Territories Department of Infrastructure (GNWT-INF) for a Geotechnical Drilling Program in Colville Lake. The Board conducted a preliminary screening of this application based on the public record for the proceeding. Based on the evidence provided, the Board is satisfied that the screening has been completed in accordance with section 125 (2) of the *Mackenzie Valley Resource Management Act* (MVRMA) and has decided that, in its opinion, there is no reasonable likelihood that the proposed application might have a significant adverse impact on the environment and that the proposed application is not a cause for public concern as set out in paragraph 125(2)(a).

The Board has therefore decided the following:

1. Not to refer the Project to Environmental Assessment;
2. To approve the GNWT-INF's Application for Geotechnical Drilling Program in Colville Lake, NT;
3. If no referral to environmental assessment is received by the end of day December 26, 2019, it will issue the S19S-005 Permit on December 27, 2019.

To assist the Board in completing a Preliminary Screening of this Application, the Board distributed the Application for public review on November 21, 2019 inviting Parties to provide comments and recommendations (e.g., on impacts and mitigation measures) using the Online Review System (ORS)¹. Comments were due December 5, 2019 with responses due December 12, 2019. The Board received comments from

- Government of the Northwest Territories Department of Lands, Sahtu Region (GNWT-Lands) Inspector related to permit conditions, clarifying information in the application documents, and suggesting the need for two additional plans (Permafrost Protection Plan and Sediment and Erosion Control Plan);
- Government of the Northwest Territories – Environment and Natural Resources (GNWT- ENR) who provided general comments related to Spill Contingency, Waste Management and Potential Impacts to Species at Risk; and
- Prince of Wales Natural Heritage Centre (PWNHC) requesting to add the Site Discovery and Notification Condition to the Permit.

No additional comments or concerns were raised by reviewers from the public review. Responses to comments and recommendations by the Applicant adequately addressed and acknowledged any remaining concerns.


Since no concerns were raised during the public review and no requests to extend reviewer comment deadline were received, the Board is satisfied that communities and First Nations affected by the Application have been notified and provided adequate time to provide comment on the Application as required by land claim and self-government agreements, subsection 63(2) of MVRMA, and any other applicable legislation and agreements.

The Board is also of the opinion that the Application can proceed through the regulatory process and that any impacts of the development on the environment can be mitigated through the imposition of the terms and conditions in the Land Use Permit.


As a result, the Board, having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the Mackenzie Valley Land Use Regulations has decided that this Land Use Permit be issued subject to the terms and conditions contained therein.

- Adequate time has been given to Reviewers to provide potential environmental impacts and mitigation measures on information as requested from the Applicant during the initial review period.
- The effects of the Project on the environment can take place in an environmentally responsible manner provided that mitigation measures outlined in the Project documents and Permit conditions are followed.

Signed the 16th Day of December, 2019, on behalf of the Sahtu Land and Water Board



Witness



Larry Wallace
Chair, Sahtu Land and Water Board

¹ Online Review System for [S19S-005](#)

PRELIMINARY SCREENING DECISION	
<input type="radio"/>	Outside Local Government Boundaries
<input type="radio"/>	The development proposal might have a significant adverse impact on the environment, <i>refer it to the EIRB.</i>
<input type="radio"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="radio"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input type="radio"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="radio"/>	Wholly within Local Government Boundaries
<input type="radio"/>	The development proposal is likely to have a significant adverse impact on air, water or renewable resources, <i>refer it to the EIRB.</i>
<input checked="" type="radio"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="radio"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input checked="" type="radio"/>	<i>Proceed with regulatory process and/or implementation.</i>

Preliminary Screening Organization

Sahtu Land & Water Board _____

Signatures

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