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May 17, 2024

File: MV2024S0009

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

Sent by email

Dear Mark Cliffe-Phillips,

Re: Department of National Defence – Notice of Preliminary Screening Determination – Application for Land Use Permit – Soil Testing – Yellowknife, NT

The Mackenzie Valley Land and Water Board (Board) met on May 9, 2024 and considered the Application Package from Department of National Defence (DND) for Land Use Permit (Permit) MV2024S0009 for drilling within the City of Yellowknife in accordance with the *Mackenzie Valley Resource Management Act* (MVRMA).

The Board conducted a 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 of the MVRMA and has decided **not to refer** the Project to environmental assessment. The Board's Preliminary Screening Determination and Reasons for Decision, as required by section 121 of the MVRMA, is attached.

If the Board does not receive notice of referral to environmental assessment, it can proceed with issuance of Permit MV2024S0009 on **Tuesday May 28, 2024**.

The Board and staff look forward to continued communications throughout the pause period. Please contact Kathy Racher via [email](#) or at (867) 766-7457 with any questions or concerns regarding this letter.

Yours sincerely,

A handwritten signature in blue ink that reads "Tanya MacIntosh". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Tanya MacIntosh
Chair, Mackenzie Valley Land and Water Board

BCC'd to: Akaitcho Distribution List
TG – Mqwhì Distribution List
Amanda Drew, DND

Attached: Preliminary Screening Determination and Reasons for Decision



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Preliminary Screening Determination and Reasons for Decision

Land Use Permit Application	
File Number	MV2024S0009
Company	Department of National Defence
Project	Yellowknife drilling
Location	Yellowknife, NT
Activity	Soil Testing
Date of Decision	May 9, 2024

1.0 Decision

In accordance with subsection 124(1) of the [Mackenzie Valley Resource Management Act](#) (MVRMA), the Mackenzie Valley Land and Water Board (MVLWB or Board) met on May 9, 2024 to make a preliminary screening determination on the Application from Department of National Defence (DND) (Applicant) for Land Use Permit MV2024S0009 (Permit)¹ for drilling within the City of Yellowknife (Project).²

The Board has decided not to refer the proposed Project to the Mackenzie Valley Environmental Impact Review Board (the Review Board) for Environmental Assessment because, based on the evidence, it is the Board's opinion that the proposed Project is not likely to have a significant adverse impact on air, water, or renewable resources, and will not be a cause of public concern.

¹See MVLWB Online Registry [www.mvlwb.com] for [DND - Yellowknife Drilling - New Permit Application Form - Mar26 24](#)

² The Project is the drilling within the City of Yellowknife for the purposes of installing and operating a heat pump, which is the proposed development, where "development" is defined in Part 5 of the [MVRMA](#) as:

"any undertaking, or any part or extension of an undertaking, that is carried out on land or water and includes an acquisition of lands pursuant to the *Historic Sites and Monuments Act* and measures carried out by a department or agency of government leading to the establishment of a park subject to the *Canada National Parks Act* or the establishment of a park under a territorial law."

The Board’s determinations, including reasons for its decisions, are detailed in sections [3.0](#) and [4.0](#).

2.0 **List of Defined Terms and Acronyms**

Applicant	Department of National Defence
Application	The complete application package submitted by the Applicant for Water Licence Land Use Permit MV2024S0009.
Board	Mackenzie Valley Land and Water Board
GNWT	Government of the Northwest Territories
GNWT-ECC	Government of the Northwest Territories – Environment and Climate Change
MVLWB	Mackenzie Valley Land and Water Board
MVRMA	Mackenzie Valley Resource Management Act
Minister	Minister of the Government of the Northwest Territories – Environment and Climate Change
ORS	Online Review System (www.new.onlinereviewssystem.ca)
Party	As per the LWB Rules of Procedure , an applicant, a person, or an organization participating in the regulatory proceeding for the Application.
Project	Yellowknife drilling, which is the proposed development (as defined in Part 5 of the MVRMA). ³
Review Board	Mackenzie Valley Environmental Impact Review Board
Standard Licence Conditions	LWB Standard Water Licence Conditions Template
Standard Permit Conditions	LWB Standard Land Use Permit Conditions Template

3.0 **Background and Scope of Screening**

On March 22, 2024, the Applicant submitted the Application.⁴ The Application is to conduct drilling within the City of Yellowknife for the purpose of installing and operating a heat pump. These activities are located within the Akaitcho Region.

The Applicant began engaging parties on February 27, 2024 and continued until March 22, 2024. The Applicant indicated they engaged the following parties prior to submitting the applications:

- Akaitcho Territory Government;
- Akaitcho IMA Implementation Office;
- North Slave Métis Alliance;
- Tłı̨chǫ Government;
- Yellowknives Dene First Nation;

³ “development” is defined in Part 5 of the [MVRMA](#) as:

“any undertaking, or any part or extension of an undertaking, that is carried out on land or water and includes an acquisition of lands pursuant to the *Historic Sites and Monuments Act* and measures carried out by a department or agency of government leading to the establishment of a park subject to the *Canada National Parks Act* or the establishment of a park under a territorial law.”

⁴ See MVLWB Online Registry for [MV2024S0009](#)

- City of Yellowknife;
- Crown Indigenous Relations and Northern Affairs Canada (CIRNAC); and
- Government of the Northwest Territories (GNWT).

On March 28, 2023, the Application was deemed complete and circulated to the Distribution List for public review on the Online Review System (ORS).⁵ To assist the Board in making its decision on the Permit, Board staff also circulated a draft Permit for review with the Application to allow all Parties the opportunity to comment on the specific wording of the draft conditions.

In accordance with paragraph 125(2)(a) of the [MVRMA](#), the Board must conduct a preliminary screening of the proposed Project to determine and report to the Review Board whether, in its opinion, the proposed Project is likely to have a significant adverse impact on air, water, or renewable resources, or might be a cause of public concern. The details of the Board's analysis are set out in section [4.0](#) below.

3.1 Scope of Screening:

The following describes the scope of the screening:

- Location:
 - Fenced area surrounding the DND's building located at 702 Deh Cho Blvd, Yellowknife, NT.
 - Less than 1 acre of land.
 - Work will be conducted on an existing gravel pad.
 - No additional land clearing is required.
- Activities
 - Borehole installation: one 6-inch diameter test borehole drilled up to a depth of 300m.
 - Well installation: A 2-inch pipe installed in the borehole Filling borehole with a grout mixture.
 - Testing: circulate fluid (30% propylene glycol and 70% water) and thermal test.
 - Site restoration: backfilling, cleaning, removing waste.
- Equipment:
 - Drill weight greater than 2.5 tonnes.
 - Support equipment: trucks, skid steer, fuel storage tidy tank, excavator (30 tonnes).

Future potential work was not contemplated in this screening. The Applicant indicated future work may include a ground-source heat pump demonstration where several more boreholes would be drilled. These additional boreholes were not contemplated in this screening.

⁵ See MVLWB Online Review System for [Department of National Defense Yellowknife Drilling New Type A Land Use Permit Application](#).

3.2 Public Record and Regulatory Proceeding

To assist the Board in its preliminary screening determination for the Project, the Board distributed the Application a draft Permit for public review on March 28, 2024, inviting reviewers to provide comments and recommendations on the Applications and the preliminary screening (e.g., on impacts and mitigation measures) using the Online Review System (ORS). Comments were due April 18, with responses from the Applicant due April 25, 2024. The Board received comments and recommendations from the following:⁶

- Tłıchǫ Government,
- GNWT Inspector,
- GNWT Environment and Climate Change (GNWT ECC),
- Environment and Climate Change Canada (ECCC), and
- Department of Fisheries and Oceans Canada (DFO).

Since there were no requests to extend the reviewer comment deadline, the Board is satisfied that a reasonable period of notice was given to affected communities and First Nations, as required by subsection 63(2) of the [MVRMA](#).

Pursuant to Schedule 4.1 of [Northwest Territory Métis Nation \(NWTMN\) Interim Measures Agreement](#),⁷ the Board determined that written notice was given to the NWTMN and that a reasonable period of time was allowed for NWTMN to make representations with respect to the Application.

Pursuant to subsection 1.6, paragraphs (a) and (b) of the [Akaitcho Territory Dene First Nations \(ATDFN\) Interim Measures Agreement](#),⁸ the Board determined that written notice was given to the ATDFN and that a reasonable period of time was allowed for ATDFN to make representations with respect to the Application.

4.0 Potential Impacts and Proposed Mitigations

Table 1 below summarizes:

- the potential impacts of the proposed Project;
- the concerns that were identified during the regulatory proceeding and how the Applicant addressed those concerns;
- the proposed and potential mitigations for the potential impacts; and
- the Board's analysis of the potential impacts and proposed mitigations.

⁶ See MVLWB Online Review System for the [Department of National Defense Yellowknife Drilling New Type A Land Use Permit Application](#).

⁷ See MVLWB Land Claims, IMAs, and Land Use Plans webpage to access the [Northwest Territory Métis Nation Interim Measures Agreement](#).

⁸ See MVLWB Land Claims, IMAs, and Land Use Plans webpage to access the [Akaitcho Territory Dene First Nations Interim Measures Agreement](#).

Table 1: Potential Impacts and Proposed Mitigations for the Proposed Project

Potential Impact	Activity	Proposed Mitigations <i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i>	Board Analysis and Determination
Atmosphere and Noise	Drilling, well installation and testing, site reclamation	<p>The Applicant indicated that atmospheric effects resulting from the project are expected to be minimal, and only associated with the operation of equipment and vehicles. Some dust/debris may be airborne in the immediate vicinity of the drill site.</p> <p>The Applicant proposed the following mitigations in the Applications:</p> <ul style="list-style-type: none"> • Excess dust and airborne particulate should be controlled with water suppression. The amount of water used shall not create runoff to the surrounding environment. Contractor shall address dust management in the Environmental Protection Plan (EPP). • Equipment, vehicles, will be in good working order. Unnecessary idling of vehicles and equipment will be prohibited. • To reduce potential interactions with VECs, equipment will only operate during required activities. When component is not being used or monitored the equipment is to be powered down • Contractors shall identify and mitigate noise and air quality issues. • Prevent the occurrence of multiple noise activities for prolonged periods. • Excess dust to be controlled with water suppression. • Equipment and vehicles will be in good working order. • Equipment and vehicles will only run when required. 	<p>Based on the described mitigations, it is the Board’s opinion that the proposed activities are not likely to have a significant adverse impact on air, water, or renewable resources, and will not be a cause of public concern.</p> <p>The Board rationale for this decision is as follows:</p> <ul style="list-style-type: none"> • Location: <ul style="list-style-type: none"> ○ The Project will be conducted on land that was previously disturbed in an industrial / commercial area; ○ The geographic size of the area likely to be affected by the impacts is small; ○ The impacts are not likely to spread to parks, protected areas, or wildlife management areas; ○ The contribution to regional cumulative impacts is negligible.
Surface Water and groundwater	Drilling, well installation and testing, site reclamation	<p>The Applicant proposed the following mitigations in the Applications:</p> <ul style="list-style-type: none"> • A Product Transfer Area (PTA), on an impermeable surface for refueling machinery or equipment will be established. The contractor will have spill response equipment on site during the entire time that heavy equipment is in use. Spill equipment must be of adequate size to contain the largest amount of liquid on site. • All stored liquid materials must be in secondary containment. • Vehicle, equipment, or storage areas will not be located near sensitive areas (i.e., drainage ditches, watercourses). • Equipment and vehicles will be in good working order and inspected on a regular basis. 	<ul style="list-style-type: none"> • Project factors: <ul style="list-style-type: none"> ○ The means of managing wastes and chemicals proposed by the Applicant are suitable for the extent of the Project. • Impact factors: <ul style="list-style-type: none"> ○ The nature of the Project indicates the impacts should be short duration and

Potential Impact	Activity	<p align="center">Proposed Mitigations</p> <p align="center"><i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i></p>	Board Analysis and Determination
		<ul style="list-style-type: none"> • If fueling of equipment is required, ensure a fueling procedure is developed that considers the sensitive environment. Re-fueling should be completed on land. • Spill kits of adequate size will be positioned near equipment, vehicles, and boats (if required). Spill response and emergency notification procedures will be posted and signed by all personnel on site. • Where possible, biodegradable hydraulic fluids will be used in equipment. • The Contractor shall refer to the Spill Contingency Plan. • If soil is generated as a result of the drilling process, soil shall be managed in accordance with DND CSI.004.001 Soil Management Instruction. If required, the contractor shall provide a Soil Management Plan as part of the EPP. • Sediment controls may be installed during drilling should excess water cause runoff of sediment at the Project Site. • If required, the Contractor shall provide an Erosion and Sediment Control Plan as part of the EPP. • Accidental spills of hydrocarbons may result in changes to water quality. See Soil Contamination mitigation measures. • Any excess water shall be contained and disposed of off-site as non-hazardous waste. Contractor to refer to the Waste Management Plan. <p>The Board has standard permit conditions that are typically used to mitigate the identified potential impacts. These standard conditions include:</p> <ul style="list-style-type: none"> • DRILLING SETBACK • PROGRESSIVE EROSION CONTROL • REPAIR EROSION • FLOWING ARTESIAN WELL • DRILLING WASTE CONTAINMENT • WASTE CHEMICAL DISPOSAL • WASTE PETROLEUM DISPOSAL • WASTE MANAGEMENT PLAN • REPAIR LEAKS • FUEL STORAGE SETBACK 	<p>of low magnitude;</p> <ul style="list-style-type: none"> ○ There should be no changes to community social structure, or changes to stress on existing social services resulting from the impacts. • The effectiveness and reliability of the proposed mitigation measures, including Permit conditions.

Potential Impact	Activity	Proposed Mitigations <i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i>	Board Analysis and Determination
		<ul style="list-style-type: none"> • SECONDARY CONTAINMENT – REFUELING • MAXIMUM FUEL ON SITE • SPILL CONTINGENCY PLAN • CLEAN UP SPILLS • REPORT SPILLS • FINAL CLEANUP AND RESTORATION 	
Soil and Geology	Drilling, well installation and testing, site reclamation	<p>The Applicant indicated that approximately 6 m3 of soil is expected to be generated as a result of the drilling. Excess soil will be drummed or bagged and sent off-site for non-hazardous waste disposal. Disposal will be supported by any required characterization required by the landfill.</p> <p>The Applicant proposed the following mitigations in the Applications:</p> <ul style="list-style-type: none"> • Soil testing in accordance with DND Soil Management Instruction CSI.004.001 (or as recommended by the EnvO based on site Contaminants of Concern) is required to mitigate impacts of excavated soils to be managed either on or off site, as applicable. • Soil with concentrations of parameters above applicable site land use guidelines shall be transported off site for appropriate disposal or treatment. • Where soil above the minimum volume of 10 m3 per the DND CSI.004.001, is to be disturbed, an Environment Consultant (QP), is required to conduct soil characterization and provide a Soil Management Plan. • A Product Transfer Area (PTA) on an impermeable surface will be established for refueling machinery. • A re-fueling procedure will be developed the contractor and approved by DND. • Spill response equipment will be on site as per the Spill Contingency Plan. • All stored liquid will be stored in secondary containment. • All excavated soils will be collected and stored in impermeable soil bags. • Soils will be sampled to determine disposal location. 	

Potential Impact	Activity	Proposed Mitigations <i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i>	Board Analysis and Determination
		<ul style="list-style-type: none"> • Sediment controls may be installed. The Contractor shall provide an Erosion and Sediment control plan as part of the EPP. <p>The Board has standard permit conditions that are typically used to mitigate the identified potential impacts. These standard conditions include:</p> <ul style="list-style-type: none"> • PROGRESSIVE EROSION CONTROL • REPAIR EROSION • FLOWING ARTESIAN WELL • DRILLING WASTE CONTAINMENT • WASTE CHEMICAL DISPOSAL • WASTE PETROLEUM DISPOSAL • WASTE MANAGEMENT PLAN • REPAIR LEAKS • FUEL STORAGE SETBACK • SECONDARY CONTAINMENT – REFUELING • MAXIMUM FUEL ON SITE • SPILL CONTINGENCY PLAN • CLEAN UP SPILLS • REPORT SPILLS • FINAL CLEANUP AND RESTORATION 	
Biological Components, including Barn Swallow And Short-eared Owl, invasive species, human wildlife conflicts	Drilling, well installation and testing, site reclamation	<p>The Applicant proposed the following mitigations in the Applications:</p> <ul style="list-style-type: none"> • If equipment if from outside the local area, all equipment will be washed prior to mobilization and demobilization. • Contractor to remain on designated roadways, pathways, and other developed areas free of vegetation. • Avoid and prevent all activities from killing SAR, migratory birds, and any other wildlife that may enter the work area. Report any incidences where SAR or all other animals are harmed or killed to the Contract Authority. • Prior to work, visually inspect the area for presence of wildlife (i.e., birds, nests, guano). Should evidence be identified Contractor must stop work until a biologist can confirm no species at risk (SAR) or migratory birds are currently using the immediate Project Site as a habitat. 	

Potential Impact	Activity	Proposed Mitigations <i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i>	Board Analysis and Determination
		<ul style="list-style-type: none"> • Contractor to comply with all applicable regulations including, but not limited to the Species at Risk Act, Migratory Birds Convention Act, and Nunavut Wildlife Act. • All food-wastes will be stored in covered wildlife resistant bins. • If equipment is from out of town, all earth-moving equipment will be washed prior to mobilization <p>The Board has standard permit conditions that are typically used to mitigate the identified potential impacts. These standard conditions include:</p> <ul style="list-style-type: none"> • HABITAT DAMAGE 	
Social and Economic Well-being	Drilling, well installation and testing, site reclamation	<p>The Applicant proposed the following mitigations in the Applications:</p> <ul style="list-style-type: none"> • Consultation, Environmental Screening and Land Use Permit Application required to the MVLWB. • Engagement is as required. <p>The Board has standard permit conditions that are typically used to mitigate the identified potential impacts. These standard conditions include:</p> <ul style="list-style-type: none"> • ENGAGEMENT PLAN 	

4.1 Consideration of Potential Impacts

Based on the potential impacts and proposed mitigations identified above in Table 1, the Board considered whether the Project is likely to have a significant adverse impact on air, water, and/or renewable resources. In general, impacts of the Project on the air, water, and/or renewable resources can be mitigated through the use of standard permit conditions and/or project-specific conditions established by the Board as per the LWB [Standard Process for Creating New Conditions](#). These conditions may include requirements for management and monitoring plans that provide detailed information regarding the implementation of mitigation measures and the evaluation of their effectiveness.

A draft Permit was circulated for review during the regulatory proceeding, and all Parties were given the opportunity to provide comments and recommendations on the draft conditions. In finalizing the conditions, the Board will consider all of the evidence provided through the regulatory proceeding.

4.2 Consideration of Public Concern

In addition to considering the potential impacts of the Project, the Board considered whether the Project might be a cause of public concern.

Based on the evidence provided during the regulatory proceeding, the Board did not identify any comments or issues that indicate that the Project is a cause of public concern.

5.0 Conclusion

The Board has reviewed all the evidence received during the regulatory process with respect to the Preliminary Screening of the proposed Project. Based on the evidence, it is the Board's opinion that the proposed Project is not likely to have a significant adverse impact on air, water, and/or renewable resources, and will not be a cause of public concern, as set out in paragraph 125(2)(a) of the [MVRMA](#). The Board has therefore decided not to refer the proposed Project to Environmental Assessment.

If the Board does not receive a notice of referral to environmental assessment by Monday May 27, 2024, the Board can issue the Permit on Tuesday May 28, 2024.

SIGNATURE



Tanya MacIntosh, Chair
Mackenzie Valley Land and Water Board

May 17, 2024

Date