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February 25, 2022

File: MV2021C0024

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: StrategX Elements Corp – Notice of Preliminary Screening Determination – Application for Land Use Permit – Mineral Exploration – Misty Lake, NT**

The Mackenzie Valley Land and Water Board (Board) met on February 24, 2022 and considered the Application from StrategX Elements Corp. (SX) for Land Use Permit (Permit) MV2021C0024 for the mineral exploration at Misty Lake, NT 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 MV2021C0024 on **Tuesday, March 8, 2022**.

The Board and staff look forward to continued communications throughout the pause period. Please contact Shelagh Montgomery at (867) 766-7457 with any questions or concerns regarding this letter.

Yours sincerely,



Mavis Cli-Michaud

Chair, Mackenzie Valley Land and Water Board

BCC'd to: Akaitcho Distribution List  
Freeman Smith, StrategX Elements Corp.

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	MV2021C0024
Company	StrategX Elements Corp.
Project	Mineral Exploration
Location	Misty Lake, NT
Activity	Mineral Exploration
Date of Decision	February 24, 2022

### 1.0 Decision

In accordance with subsection 124(1) of the *Mackenzie Valley Resource Management Act* (MVRMA), the Mackenzie Valley Land and Water Board (MLWB or Board) met on February 24, 2022 to make a preliminary screening determination on the Application from StrategX Elements Corp. (SX) (Applicant) for Land Use Permit MV2021C0024 (Permit)<sup>1</sup> for the Mineral Exploration at Misty Lake area in the Northwest Territories (Project).<sup>2</sup>

The Board's determination, including reasons for its decision, are detailed in sections [3.0](#) and [4.0](#).

<sup>1</sup>See MLWB Online Registry [www.mvlwb.com](http://www.mvlwb.com) for StrategX Elements Corp. – [Permit Application – Jan6 22](#)

<sup>2</sup> The Project is the Mineral Exploration at Misty Lake area in the Northwest Territories, 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."

## 2.0 List of Defined Terms and Acronyms

Applicant	StrategX Elements Corp. (SK)
Application	The complete application package submitted by the Applicant for Land Use Permit MV2021C0024.
Board	Mackenzie Valley Land and Water Board
GNWT	Government of the Northwest Territories
GNWT-ENR	Government of the Northwest Territories – Environment and Natural Resources
GNWT-Lands	Government of the Northwest Territories – Lands
MVLWB	Mackenzie Valley Land and Water Board
MVRMA	<i>Mackenzie Valley Resource Management Act</i>
Minister	Minister of the Government of the Northwest Territories – Lands (GNWT-Lands)
ORS	Online Review System ( <a href="http://www.new.onlinereviewsystem.ca">www.new.onlinereviewsystem.ca</a> )
Project	Mineral Exploration, which is the proposed development (as defined in Part 5 of the MVRMA). <sup>3</sup>
SCP	Spill Contingency Plan
Standard Permit Conditions	MVLWB <a href="#">Standard Land Use Permit Conditions Template</a>
TK	Traditional Knowledge
WMP	Waste Management Plan

## 3.0 Background and Scope of Screening

On January 6, 2022, the Applicant submitted application for a new Permit MV2021C0024 (the Application).<sup>4</sup> The Application is for a diamond drilling program at Misty Lake. SK anticipates the first phase to occur in early March and extend into early April 2022. If the drilling is met with success a second phase of drilling would resume in the winter but wish to keep drilling season flexible. The first phase of the program will include a small camp and drilling on ice such that the area will be small and the reclamation not extensive. The campsite will be about 30m by 40m. The second phase of the program may occur on land and will include several small drill pads estimated to be less than 1 ha in total. In the second phase the camp may need to be moved closer to the proposed drilling to minimize disturbance and cost. At this stage the crew would increase in size to possibly as much as 15 people and have a footprint of about 0.25ha.

The first phase of drilling is proposed in 2022 is estimated to take 6 weeks with 10 people in a camp. Water for drilling will be withdrawn from Misty Lake. The maximum pumping rate of a diamond drill is 45.4L/m. This water is however heated and recirculated to the volume per day is variable and likely between 10 and 20m<sup>3</sup> per day. The camp would consume about 1-2 m<sup>3</sup> of water per day.

<sup>3</sup> “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.”

<sup>4</sup> See MLWB Online Registry for StrategX Elements Corp. – [Permit Application –Jan6 22](#).

Supplies will be dropped by plane and moved by snow mobile to the camp for storage. A helicopter may be required to move items around. The drill will be towed on the ice by light weight vehicles. In subsequent drill campaigns, should they occur, a helicopter will be required. No roads will be required, clearing of drill pads will be needed.

Wastes will be removed from site and will be disposed at an appropriate facility.

A Waste Management Plan, Spill Contingency Plan and Engagement Plan were included with the Application.

An Engagement Record and Engagement Plan were included in the Application. SX noted they engaged with the following Parties:

- Łutselk'e First Nation
- Denínu Kúé First Nation
- Northwest Territories Métis Nation
- NWT Chamber of Mines
- City of Yellowknife
- GNWT – ENR
- GNWT – Lands
- Prince of Wales Northern Heritage Centre
- Tłıchq Government
- Yellowknives Dene First Nation

Engagement was noted in August 2018, June 2020, February 2021, July 2021, August 2021, October 2021 and November 2021.

On January 14, 2022, the Application was distributed on the Online Review System with comments and recommendation submitted by February 3, 2022. Responses were submitted by the Applicant on February 14, 2022.

In accordance with paragraph 125 (1)(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 might have a significant adverse impact on the environment, **OR** is likely to have a significant adverse impact on air, water, and/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:**

\*see section 3.0

### **3.2 Public Record and Regulatory Proceeding**

To assist the Board in its preliminary screening determination for the Project, the Board distributed the Application and a draft Permit for public review on January 14, 2022, 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 February 3, 2022, with responses from the Applicant due February 14, 2022. The Board received comments and recommendations from Government of the Northwest Territories – Environment and Natural Resources and Environment and Climate Change Canada.<sup>5</sup>

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.

### **4.0 Potential Impacts and Proposed Mitigations**

For Board permits in general, potential impacts can be mitigated through standard Board permit conditions, and/or project-specific conditions established by the Board as per the MVLWB [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 or 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.

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.

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<sup>5</sup> See MLWB Online Registry for StrategX Elements Corp. – [Review Comment Summary Table – Feb24\\_22](#)

**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 Staff Analysis
Soil Contamination	Use of fuel	<ul style="list-style-type: none"> <li>• The Applicant proposed the following mitigations in the Applications:               <ul style="list-style-type: none"> <li>○ Fuel will be stored in secondary containment and drip pads will be used. Every effort will be made to avoid fuel spills.</li> </ul> </li> <li>• The Board has standard permit conditions that are typically used to mitigate the described impacts.<sup>6</sup> <ul style="list-style-type: none"> <li>○ Repair leaks</li> <li>○ Fuel storage setback</li> <li>○ Fuel cache secondary containment</li> <li>○ Secondary containment- refueling</li> <li>○ Fuel containment</li> <li>○ Mark fuel location</li> <li>○ Report fuel location</li> <li>○ Spill Contingency Plan</li> <li>○ Spill Response</li> <li>○ Drip trays</li> <li>○ Clean up spills</li> <li>○ Report spills</li> </ul> </li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.

<sup>6</sup> See the MVLWB Policies and Resources webpage to access the MVLWB [Standard Land Use Permit Conditions Template](#).

Soil Compaction	Camp construction and occupancy and drilling activities	<ul style="list-style-type: none"> <li>• The Applicant described that the camp is temporary.</li> <li>• Should there be a second drilling campaign drilling might occur near the shore of Misty Lake in which case additional measures would be required. To avoid soil compaction drill moves may require a helicopter to transport over sensitive areas to non-vegetated areas. Winter activities to occur on compacted snow/ice base; During the summer season to be located on durable land like rock (where practical). Snowmobile trails will be minimized to avoid disturbance.</li> <li>• To avoid soil compaction drill moves may require a helicopter to transport over sensitive areas to non-vegetated areas.</li> <li>• The Board has standard permit conditions that are typically used to mitigate the described impacts. These standard conditions include: <ul style="list-style-type: none"> <li>○ Camp setback</li> <li>○ Drill locations</li> <li>○ Sump setback</li> </ul> </li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.
Water flow or level changes	Use of water	<ul style="list-style-type: none"> <li>• Drilling with implement a closed-circuit system with full containment at the collar. Cuttings and water will be disposed on land 100m meters from the lake within a natural depression.</li> <li>• The Board has standard permit conditions that are typically used to mitigate the described impacts. These standard conditions include: <ul style="list-style-type: none"> <li>○ Sump setback</li> <li>○ Natural drainage</li> <li>○ Drilling near water or on ice</li> <li>○ Drilling waste</li> <li>○ Drilling waste disposal</li> <li>○ Drilling waste containment</li> <li>○ Reclaim non-oil and gas sumps</li> <li>○ Waste chemical disposal</li> <li>○ Waste petroleum disposal</li> </ul> </li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.



Changes in water quality	Use of fuel and drilling	<ul style="list-style-type: none"> <li>• Fuel spills could impact water quality. A comprehensive spill and wastewater plan has been put in place to minimize and potential impacts to water quality.</li> <li>• The Spill Plan comprises having cleanup materials readily accessible and available. We propose staff training and labeling of fuel caches. Drilling with implement a closed-circuit system with full containment at the collar. Cuttings and water will be disposed on land 100m meters from the lake within a natural depression.</li> <li>• The Board has standard permit conditions that are typically used to mitigate the described impacts. <ul style="list-style-type: none"> <li>○ Repair leaks</li> <li>○ Fuel storage setback</li> <li>○ Fuel cache secondary containment</li> <li>○ Secondary containment- refueling</li> <li>○ Fuel containment</li> <li>○ Mark fuel location</li> <li>○ Report fuel location</li> <li>○ Spill Contingency Plan</li> <li>○ Spill Response</li> <li>○ Drip trays</li> <li>○ Clean up spills</li> <li>○ Report spills</li> </ul> </li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.
Changes in air quality and increased greenhouse gases	Equipment exhaust	<ul style="list-style-type: none"> <li>• The Applicant described that equipment use will be temporary and short term during seasonal exploration however, activities may move to other seasons.</li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.

Direct loss of vegetation	Removal of branches and scrub for mineral exploration activities and heli- pad construction. Compaction of vegetation.	<ul style="list-style-type: none"> <li>• Clearing of ground may be required to construct drill pads should there be a second drill program. If this impact is deemed to cause a direct loss of vegetation that cannot regenerate naturally planting of vegetation may be required. However, for the first 2022 drill program is proposed to be conducted on ice so impact of soils will not occur.</li> <li>• The proposed camp is to be located on a partly rocky island where disturbance is expected to be low.</li> <li>• The Board has standard permit conditions that are typically used to mitigate the described impacts. <ul style="list-style-type: none"> <li>○ Location of activities</li> <li>○ Drill locations</li> </ul> </li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.
Direct loss or removal of habitat, dens, or nests	Construction and operation of a camp, mineral exploration activities  Direct injury or mortality  Disturbances to key lifecycle stages: breeding, feeding, nesting, staging  Changes to migratory movement patterns	<ul style="list-style-type: none"> <li>• Should there be a second drilling campaign in 2023 drilling might occur near the shore of Misty Lake in which case additional measures would be required. Dens will need to be identified. Drilling is suspended for the Spring months particularly in May when migrating birds may be using the shoreline for nesting.</li> <li>• The Board has standard permit conditions that are typically used to mitigate the described impacts. <ul style="list-style-type: none"> <li>○ Habitat damage</li> </ul> </li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.

Direct loss or removal of habitat, dens, or nests	Changes to migratory movement patterns	<ul style="list-style-type: none"> <li>• Should there be a second drilling campaign drilling might occur near the shore of Misty Lake in which case additional measures would be required. Dens will need to be identified. Drilling is suspended for the Spring months particularly in May when migrating birds may be using the shoreline for nesting</li> <li>• The Board has standard permit conditions that are typically used to mitigate the described impacts. <ul style="list-style-type: none"> <li>○ Habitat damage</li> </ul> </li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.
Human-wildlife conflicts	Operation of a camp and mineral exploration activities	<ul style="list-style-type: none"> <li>• All wildlife deterrent actions taken will be reported by submitting a completed incident STX will document all such incidents and report to GNWTENR immediately</li> <li>• The Board has standard permit conditions that are typically used to mitigate the described impacts. <ul style="list-style-type: none"> <li>○ Habitat damage</li> </ul> </li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.
Effects on traditional land use, subsistence, and harvesting rights	Operation of a camp and mineral exploration activities	<ul style="list-style-type: none"> <li>• The area of Misty Lake may have been a canoe route into the interior from Great Slave Lake by FN Groups. The current plans are to drill in the winter season when the ground and lake are frozen. To the best of our knowledge there is no winter harvesting occurring in this area</li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.
Economic opportunities or losses (employment, training)	Operation of a camp and mineral exploration activities	<ul style="list-style-type: none"> <li>• We see the project as a potential employer for NWT and FN peoples. STX has already employed people from the Lutselk'e Village in addition to Air Tindi, Great Slave Helicopter, Hoarfrost Air, Aurora Geosciences and Discovery Mining Services</li> </ul>	Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.

<p>Impairment of the aesthetic quality of the land or water</p>	<p>Operation of a camp and mineral exploration activities</p>	<ul style="list-style-type: none"> <li>• Winter drilling may create some temporary disturbance to the landscape however this would be short-lived and not permanent and exist for the length of the exploration project only (tents, drill helicopter on site)</li> </ul>	<p>Based on the described mitigations, it is Board staff opinion that the proposed activities will not have a significant adverse impact on the environment or will not be a cause of public concern.</p>
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#### 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 might have a significant adverse impact on the environment **OR** is likely to have a significant adverse impact on air, water, and/or renewable resources. In general, impacts of the Project on the environment can be mitigated through the use of standard permit conditions and/or project-specific conditions established by the Board as per the MVLWB [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 thus far, 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 will not have a significant adverse impact on the environment or be a cause of public concern, as set out in paragraph 125(1)(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 March 7, 2022, the Board can issue the Permit on March 8, 2022.

SIGNATURE



February 25, 2022

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**Mavis Cli-Michaud, Chair**  
**Mackenzie Valley Land and Water Board**

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**Date**