



Mackenzie Valley Land and Water Board
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January 17, 2019

File: MV2018C0023

Mr. Alan Sexton, VP Exploration
TerraX Minerals Inc.
312-10 Green Street
OTTAWA ON K2J 3Z6

Email: AS.GEOVECTOR@BELLNET.CA

Dear Mr. Sexton:

**Issuance of Type A Land Use Permit
Mineral Exploration, Yellowknife, NT**

Attached is Type A Land Use Permit MV2018C0023 granted by the Mackenzie Valley Land and Water Board (MVLWB or the Board) in accordance with the *Mackenzie Valley Resource Management Act* (MVRMA). This Permit has been approved for a period five years commencing January 17, 2019 and expiring January 16, 2024.

Permit Conditions

Please read all conditions carefully. For the purpose of submitting plans in accordance with this Permit, the date of this letter, January 17, 2019, is the date of commencement.

Reclamation Security

In accordance with Permit condition 53, a security deposit totaling \$231,252.00 has been set based on a phased schedule. A security amount of \$130,123.00 shall be posted with the Minister and copied to the Board prior to the start of the land use operation under section 32 of the Mackenzie Valley Land Use Regulations. Additional security deposits of \$63,356.00 is required prior to use of more than six diamond drills and \$37,773.00 is required prior to construction and operation of a camp. As delegated under Schedule A of the Delegation Instrument under the MVRMA, the security deposit, **payable to the Government of the Northwest Territories** in the amount of \$130,123.00, shall be submitted to: the Government of the Northwest Territories, Department of Lands, North Slave Regional Office, 140 Bristol Avenue, Yellowknife NT, X1A 3T2 prior to commencement of land use operations. For more information about posting security with the GNWT, please contact Charlene Coe, Land Use Advisor, at (867) 767-9187 (ext. 24194). Please send a copy of the receipts for the security deposit to the MVLWB office for each phase of security posted.

Management Plans - Approved

The Board hereby approves the following Plans as summarized in Table 1:

Table 1: Plans that have been approved

Condition Number	Title of Plan	Date Received
79	Engagement Plan, Version 1	December 3, 2018
66	Spill Contingency Plan, Version 2	January 3, 2019
44	Waste Management Plan, Version 2	January 3, 2019
77	Closure and Reclamation Plan, Version 1	December 3, 2018

Discontinuance

Should you wish to discontinue your land-use operation at any time prior to the expiry date set out in the Permit, a written notice of discontinuance is required as per section 37 of the MVLUR, in addition to the submission of a final plan.

Public Registry

A copy of this Permit and all related correspondence and documents has been filed on the [Public Registry](#) at the MVLWB office. Please be advised that this letter, inspection reports, and related correspondence is part of the Public Registry and is intended to keep all interested parties informed of the manner in which the Permit requirements are being met. All Public Registry material will be considered if an amendment to the Permit is requested.

The Board reminds TerraX Minerals Inc. to adhere to all the commitments made in response to reviewer comments. The full cooperation of TerraX Minerals Inc. is anticipated and appreciated. If you have any questions or concerns, please contact Kierney Leach at (867) 766-7470 or email kleach@mvlwb.com.

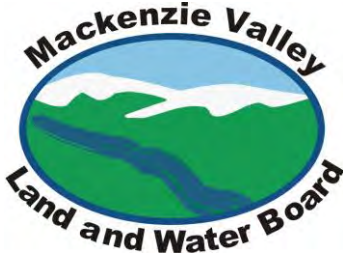
Yours sincerely,



Mavis Cli-Michaud
MVLWB, Chair

Copied to: Distribution List
Charlene Coe, GNWT, Land Use Advisor

Attached: Land Use Permit MV2018C0023
Reasons for Decision
Review Summary Table



Land Use Permit

Permit Class	Permit No	Amendment No
A	MV2018C0023	

Subject to the Mackenzie Valley Land Use Regulations and the terms and conditions in this Permit, authority is hereby granted to:

TerraX Minerals Inc.

Permittee

to proceed with the land use operation described in the Application of:

Signature Mr. Alan Sexton	Date November 30, 2018
Type of Land Use Operation Mineral Exploration	
Location Yellowknife, NT	

This Permit may be assigned, extended, discontinued, suspended, or cancelled pursuant to the Mackenzie Valley Land Use Regulations.

Dated at Yellowknife this 17 day of January, 2019

Signature Chair

Mavis Cli-Michaud

Signature Witness

Amanda Gauthier

Effective Date:

January 17, 2019

Expiry Date:

January 16, 2024

ATTENTION

It is a condition of this Permit that the Permittee comply with the provisions of the *Mackenzie Valley Resource Management Act* and Regulations and the terms and conditions set out herein. A failure to comply may result in suspension or cancellation of this Permit.

Conditions Annexed to and Forming Part of Land Use Permit # MV2018C0023

Part A: Scope of Permit

1. This Permit entitles the Permittee to conduct the following land-use operation:
 - a) Mineral exploration including diamond drilling;
 - b) Use of equipment, vehicle, and machines;
 - c) Use and storage of fuel;
 - d) Construction, operation, and maintenance of camp(s); and
 - e) Construction, operation, and maintenance of winter road and access road.
2. This Permit is issued subject to the conditions contained herein with respect to the use of land for the activities and area identified in Part A, item 1 of this Permit.
3. Compliance with the terms and conditions of this Permit does not excuse the Permittee from its obligation to comply with the requirements of any applicable Federal, Territorial, Tłıchǫ, or Municipal laws.

Part B: Definitions (defined terms are capitalized throughout the Permit)

Act - the *Mackenzie Valley Resource Management Act*.

Archaeological Overview - as defined by the Prince of Wales Northern Heritage Centre – *Guidelines for Developers for the Protection of Archaeological Sites in the Northwest Territories*.

Archaeological Impact Assessment - as defined by the Prince of Wales Northern Heritage Centre – *Guidelines for Developers for the Protection of Archaeological Sites in the Northwest Territories*.

Board - the Mackenzie Valley Land and Water Board established under Part 4 of the Act, or the Mackenzie Valley Land and Water Board established under Part 3 of the Act, as the case may be.

Borehole - a hole that is made in the surface of the ground by drilling or boring.

Drilling Waste - all materials or chemicals, solid or liquid, associated with drilling, including drill cuttings and Drilling Fluids.

Durable Land - land that is able to withstand repeated use, such as gravel or sand with minimal vegetative cover.

Engagement Plan - a document, developed in accordance with the Board's *Engagement and Consultation Policy* and the *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*, that clearly describes how, when, and which engagement activities will occur with an affected party during the life of the project.

Flowing Artesian Well - a well in which water:

- a) Naturally rises above the ground surface or the top of any casing; and
- b) Flows naturally, either intermittently or continuously.

Fuel Storage Container - a container for the storage of petroleum or allied petroleum products with a capacity of less than 230 litres.

Fuel Storage Tank - a closed container for the storage of petroleum or allied petroleum products with a capacity of more than 230 litres.

Greywater - all liquid wastes from showers, baths, sinks, kitchens, and domestic washing facilities but not including toilet wastes.

Habitat - the area or type of site where a species or an individual of a species of wildlife naturally occurs or on which it depends, directly or indirectly, to carry out its life processes.

Inspector - an Inspector designated by the Minister under the *Act*.

Minister - the Minister of Indian Affairs and Northern Development Canada or the Minister of the Government of the Northwest Territories – Department of Lands, as the case may be.

Ordinary High Water Mark - the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land. In flowing waters (rivers, streams) this refers to the “active channel/bank-full level” which is often the 1:2 year flood flow return level. In inland lakes, wetlands, or marine environments, it refers to those parts of the Watercourse bed and banks that are frequently flooded by water so as to leave a mark on the land and where the natural vegetation changes from predominately aquatic vegetation to terrestrial vegetation (excepting water tolerant species). For reservoirs, this refers to normal high operating levels (full supply level).

Permittee - the holder of this permit.

Permafrost - ground (soil or rock) that remains at or below 0°C for at least two consecutive years.

Secondary Containment - containment that prevents liquids that leak from Fuel Storage Tanks or containers from reaching outside the containment area and includes double-walled Tanks, piping, liners, and impermeable barriers.

Sewage - all toilet wastes and Greywater.

Sewage Disposal Facilities - Sump(s) and/or Sewage collection tank(s) and/or storage containers designed to hold Sewage.

Spill Contingency Plan - a document, developed in accordance with Aboriginal Affairs and Northern Development Canada’s *Guidelines for Spill Contingency Planning* (April 2007, that describes the set of procedures to be implemented to minimize the effects of a spill.

Sump - a man-made pit or natural depression in the earth's surface used for the purpose of depositing Waste that does not contain Toxic Material, such as non-toxic Drilling Waste or Sewage, therein.

Toxic Material - any substance that enters or may enter the environment in a quantity or concentration or under conditions such that it:

- a) Has or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- b) Constitutes or may constitute a danger to the environment on which life depends; or
- c) Constitutes or may constitute a danger in Canada to human life or health.

Waste - any garbage, debris, chemical, or Toxic Material to be used, stored, disposed of, or handled on land, and also as defined in section 51 of the Act.

Waste Management Plan - a document, developed in accordance with the Board's *Guidelines for Developing a Waste Management Plan*, that describes the methods of Waste management from Waste generation to final disposal.

Watercourse - a natural body of flowing or standing water or an area occupied by water during part of the year, and includes streams, springs, swamps and gulches but does not include groundwater.

Part C: Conditions Applying to All Activities (headings correspond to subsection 26(1) of the Mackenzie Valley Land Use Regulations)

26(1)(a) Location and Area

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| 1. | The Permittee shall not conduct any part of the land-use operation within 50 metres of any privately owned or leased land or structure, unless otherwise authorized in writing by the Board. | PRIVATE PROPERTY |
| 2. | The Permittee shall locate all camps on Durable Land or previously cleared areas. | CAMP LOCATION |
| 3. | Prior to the commencement of drilling, the Permittee shall submit the drill target locations on a 1:50,000-scale map with coordinates and map datum to the Board and an Inspector. | DRILL LOCATIONS |
| 4. | The Permittee shall not construct parallel lines or roads, unless an existing line or road cannot be used | PARALLEL ROADS |
| 5. | The Permittee shall locate all lines, trails, and right-of-ways to be constructed parallel to any Watercourse a minimum of 100 metres from the Ordinary High Water Mark, except at crossings. | PARALLEL WATERCOURSE |
| 6. | The Permittee shall not conduct this land-use operation on any lands not designated in the complete application. | LOCATION OF ACTIVITIES |
| 7. | The Permittee shall confine the width of the right of way to a maximum of ten (10) metres, unless otherwise authorized in writing by a Land Use Inspector. The Permittee shall not clear a right-of-way that is wider than 12 metres. | WIDTH RIGHT-OF-WAY |

26(1)(b) Time

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| 8. | At least 48 hours prior to the commencement of the land-use operation, the Permittee's Field Supervisor shall contact an Inspector at (867) 797-9188. | CONTACT INSPECTOR |
| 9. | At least 48 hours prior to commencement of the land-use operation, the Permittee shall provide the following information, in writing, to the Board and an Inspector:
<ul style="list-style-type: none"> a) the name(s) of the person(s) in charge of the field operation; b) alternates; and c) all methods for contacting the above person(s). | IDENTIFY AGENT |
| 10. | At least ten days prior to the completion of the land-use operation, the Permittee shall advise an Inspector of:
<ul style="list-style-type: none"> a) the plan for removal or storage of equipment and materials; and b) when final cleanup and reclamation of the land used will be completed. | REPORTS BEFORE REMOVAL |

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| 11. | The Board, for the purpose of this operation, designates April 15, as spring break-up. | SPRING
BREAK-UP |
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26(1)(c) Type and Size of Equipment

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| 12. | The Permittee shall not use any equipment except of a similar type, size, and number to that listed in the complete application. | ONLY APPROVED
EQUIPMENT |
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26(1)(d) Methods and Techniques

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| 13. | The Permittee shall Dogleg lines, trails and right-of-ways that approach Watercourses or public roads. | DOGLEG APPROACHES |
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| 14. | Prior to the movement of any vehicle that exerts pressure on the ground in excess of 35 kPa, the Permittee shall scout proposed lines and routes to select the best location for crossing streams and avoiding terrain obstacles. | DETOURS AND
CROSSINGS |
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| 15. | Immediately upon completion of operations at each Borehole, the Permittee shall remove or cut off and seal each drill casing at ground level. | MINERAL
EXPLORATION DRILL
CASINGS |
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| 16. | The Permittee shall construct and maintain the overland portion of winter roads with a minimum of 10 cm of packed snow and/or ice at all times during this land-use operation. | WINTER ROADS |
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| 17. | The Permittee shall not erect camps or store material, other than that required for immediate use, on the ice surface of a Watercourse. | STORAGE ON ICE |
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| 18. | The Permittee shall leave a buffer strip of undisturbed vegetation at least 30 metres in width between cleared areas and public roads. | TREE SCREEN |
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26(1)(e) Type, Location, Capacity, and Operation of All Facilities

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| 19. | The Permittee shall ensure that the land use area is kept clean at all times. | CLEAN WORK AREA |
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| 20. | The Permittee shall not locate any Sump within 100 metres of the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector. | SUMPS FROM WATER |
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26(1)(f) Control or Prevention of Ponding of Water, Flooding, Erosion, Slides, and Subsidence of Land

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| 21. | The Permittee shall insulate the ground surface beneath all structures associated with this land-use operation to prevent: | PERMAFROST
PROTECTION |
| | a) any vegetation present from being removed; | |
| | b) the melting of Permafrost; and | |
| | c) the ground settling and/or eroding. | |

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| 22. | The land-use operation shall not cause obstruction to any natural drainage. | NATURAL DRAINAGE |
| 23. | The Permittee shall, where flowing water from a Borehole is encountered:
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. | FLOWING ARTESIAN
WEL |
| 24. | The Permittee shall prepare the site in such a manner as to prevent rutting of the ground surface. | PREVENTION OF
RUTTING |
| 25. | The Permittee shall suspend overland travel of equipment or vehicles at the first sign of rutting. | SUSPEND OVERLAND
TRAVEL |
| 26. | The Permittee shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. | VEHICLE MOVEMENT
FREEZE-UP |
| 27. | The Permittee shall not use any material other than clean water and snow in the construction of ice bridges. | ICE BRIDGE
MATERIALS |
| 28. | The Permittee shall not use any materials other than clean snow and water in the construction of snow fills. | SNOWFILL MATERIALS |
| 29. | Prior to spring break-up or completion of the land-use operation, the Permittee shall clean up and either remove or v-notch all snowfills from stream crossings, unless otherwise authorized in writing by an Inspector. | REMOVE OR V-NOTCH
SNOWFILLS |
| 30. | Prior to spring break-up or completion of the land-use operation, the Permittee shall clean up and v-notch all ice bridges, unless otherwise authorized in writing by an Inspector. | V-NOTCH ICE BRIDGES |
| 31. | The Permittee shall not cut any stream bank, unless otherwise authorized in writing by an Inspector. | STREAM BANKS |
| 32. | The Permittee shall minimize approach grades on all Watercourse crossings. | MINIMIZE APPROACH |
| 33. | The Permittee shall not remove vegetation or operate heavy equipment within 100 metres of the Ordinary High Water Mark of any Watercourse. | WATERCOURSE
BUFFER |
| 26(1)(g) Use, Storage, Handling, and Ultimate Disposal of Any Chemical or Toxic Material | | |
| 34. | At least seven days prior to the use of any chemicals that were not identified in the complete application, the MSDS sheets must be provided to the Board and an Inspector. | CHEMICALS |

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| 35. | When drilling within 100 metres of the Ordinary High Water Mark of any Watercourse, and when drilling on ice, the Permittee shall contain all drill water and Drilling Waste in a closed circuit system for reuse, off-site disposal, or deposit into a land-based Sump or natural depression. | DRILLING NEAR WATER OR ON ICE |
| 36. | The Permittee may deposit Drilling Waste that does not contain Toxic Material in a Sump or natural depression. Any Sumps or natural depressions used to deposit Drilling Waste must be located at least 100 metres from the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector. | DRILLING WASTE |
| 37. | The Permittee shall remove all Drilling Waste containing Toxic Material to an approved disposal facility. | DRILLING WASTE DISPOSAL |
| 38. | The Permittee shall not allow any Drilling Waste to spread to the surrounding lands or Watercourses. | DRILLING WASTE CONTAINMENT |
| 39. | Prior to the expiry date of this Permit or the end of the land-use operation whichever comes first, the Permittee shall backfill and restore all Sumps, unless otherwise authorized in writing by an Inspector. | BACKFILL SUMPS |
| 40. | The Permittee shall maintain a record of all spills. For all reportable spills, in accordance with the <i>GNWT Spill Contingency Planning and Reporting Regulations</i> , the Permittee shall: <ul style="list-style-type: none"> a) immediately report each spill to the 24-hour Spill Report Line (867) 920-8130; b) report each spill to an Inspector within 24 hours; and c) submit, to the Board and an Inspector, a detailed report on each spill within 30 days. | REPORT SPILLS |
| 41. | The Permittee shall dispose of all Toxic Material as described in the approved Waste Management Plan. | WASTE CHEMICAL DISPOSAL |
| 42. | The Permittee shall dispose of all combustible Waste petroleum products by removal to an approved disposal facility. | WASTE PETROLEUM DISPOSAL |
| 26(1)(h) Wildlife and Fish Habitat | | |
| 43. | The Permittee shall take all reasonable measures to prevent damage to wildlife and fish Habitat during this land-use operation. | HABITAT DAMAGE |
| 26(1)(i) Storage, Handling, and Disposal of Refuse or Sewage | | |
| 44. | The Permittee shall adhere to the Waste Management Plan , once approved, and shall annually review the plan and make any necessary revisions to reflect changes in operations, technology, chemicals, or fuels, or as directed by the Board. Revisions to the plan shall be submitted to the Board for approval. | WASTE MANAGEMENT |

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| 45. | The Permittee shall keep all garbage and debris in a secure container until disposal. | GARBAGE CONTAINER |
| 46. | The Permittee shall dispose of all garbage, Waste, and debris as described in the approved Waste Management Plan, unless otherwise authorized in writing by an Inspector. | REMOVE GARBAGE |
| 47. | The Permittee shall dispose of all Sewage and Greywater as described in the approved Waste Management Plan. | SEWAGE DISPOSAL –
PLAN |

26(1)(j) Protection of Historical, Archaeological, and Burial Sites

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| 48. | The Permittee shall not operate any vehicle or equipment within 30 metres of a known or suspected historical or archaeological site or burial ground. | ARCHAEOLOGICAL
BUFFER |
| 49. | The Permittee shall not knowingly remove, disturb, or displace any archaeological specimen or site. | SITE DISTURBANCE |
| 50. | The Permittee shall, where a suspected archaeological or historical site, or burial ground is discovered: <ul style="list-style-type: none"> a) immediately suspend operations on the site; and b) notify the Board at (867) 669-0506 or an Inspector at (867) 797-9188, and the Prince of Wales Northern Heritage Centre at 767-9347 ext. 71250 or ext. 71251. | SITE DISCOVERY AND
NOTIFICATION |
| 51. | At least 30 days prior to any new land disturbance, including new drill sites, the Permittee shall conduct an Archaeological Overview to identify areas of high and low potential for archaeological and burial sites and shall submit a summary report to the Board and the Prince of Wales Northern Heritage Centre. | ARCHAEOLOGICAL
OVERVIEW |
| 52. | Prior to disturbance in areas of high potential for archaeological or burial sites identified in the Archaeological Overview, the Permittee shall conduct an Archaeological Impact Assessment of the sites where disturbance is planned and shall submit a summary report to the Board and the Prince of Wales Northern Heritage Centre. | AIA – HIGH
POTENTIAL |

26(1)(k) Objects and Places of Recreational, Scenic, and Ecological Value

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26(1)(l) Security Deposit

53. The Permittee shall deposit with the Minister a security deposit totaling \$231,252.00 based on the schedule set out below: **SECURITY DEPOSIT**
- a) Prior to the commencement of land use operations, the Permittee shall post and maintain a total security deposit of \$130,123.00;
 - b) Prior to the use of more than 6 diamond drills, the Permittee shall post and maintain an additional security deposit in the amount \$63,356.00; and
 - c) Prior to the construction and operation of a camp, the Permittee shall post and maintain an additional security deposit in the amount of \$37,773.00.

54. All costs to remediate the area under this Permit are the responsibility of the Permittee. **RESPONSIBILITY FOR REMEDIATION COSTS**

26(1)(m) Fuel Storage

55. The Permittee shall: **CHECK FOR LEAKS**
- a) examine all Fuel Storage Containers and Tank for leaks a minimum of once per day, while operating; and
 - b) repair all leaks immediately.

56. The Permittee shall not place any Fuel Storage Containers or Tanks within 100 metres of the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector. **FUEL NEAR WATER**

57. The Permittee shall ensure that all fuel caches have adequate Secondary Containment. **FUEL CACHE SECONDARY CONTAINMENT**

58. The Permittee shall set up all refueling points with Secondary Containment. **SECONDARY CONTAINMENT – REFUELING**

59. The Permittee shall not allow petroleum products to spread to surrounding lands or Watercourses. **FUEL CONTAINMENT**

60. The Permittee shall locate mobile fuel facilities on land when the facilities are stationary for more than 12 hours. **FUEL ON LAND**

61. The Permittee shall mark all Fuel Storage Containers and Tanks with the Permittee's name. **MARK CONTAINERS AND TANKS**

62. The Permittee shall mark all stationary fuel caches and fuel storage facilities with flags, posts, or similar devices so that they are at all times plainly visible to local vehicle travel. **MARK FUEL LOCATION**

63.	The Permittee shall have a maximum of 118,130 litres of fuel stored on the land use site at any time, unless otherwise authorized in writing by the Board.	MAXIMUM FUEL ON SITE
64.	Within ten days of the establishment of any fuel cache, the Permittee shall report the location and quantity of the cache in writing to the Board and an Inspector.	REPORT FUEL LOCATION
65.	The Permittee shall seal all outlets of Fuel Storage Containers and store the containers on their sides with the outlets located at 3 and 9 o'clock, except for containers currently in use.	SEAL OUTLET
66.	The Permittee shall adhere to the Spill Contingency Plan , once approved, and shall annually review the plan and make any necessary revisions to reflect changes in operations, technology, chemicals, or fuels, or as directed by the Board. Revisions to the plan shall be submitted to the Board for approval.	SPILL CONTINGENCY PLAN
67.	Prior to commencement of the land-use operation the Permittee shall ensure that spill-response equipment is in place to respond to any potential spills.	SPILL RESPONSE
68.	All equipment that may be parked for two hours or more, shall have a haz-mat/drip tray under it or be sufficiently diapered. Leaky equipment shall be repaired immediately.	DRIP TRAYS
69.	The Permittee shall clean up all leaks, spills, and contaminated material.	CLEAN UP SPILLS
26(1)(n) Methods and Techniques for Debris and Brush Disposal		
70.	Prior to the expiry date of this Permit, the Permittee shall progressively dispose of all brush and trees and shall complete all brush disposal; all disposal shall be completed.	BRUSH DISPOSAL/ TIME
71.	The Permittee shall not clear areas larger than identified in the complete application.	MINIMIZE AREA CLEARED
26(1)(o) Restoration of the Lands		
72.	Prior to the expiry date of this Permit, the Permittee shall complete all cleanup and restoration of the lands used.	FINAL CLEANUP AND RESTORATION
73.	Prior to the expiry date of this Permit, the Permittee shall prepare the site in such a manner as to facilitate natural revegetation.	NATURAL VEGETATION
74.	The Permittee shall carry out progressive reclamation of disturbed areas as soon as it is practical to do so.	PROGRESSIVE RECLAMATION
75.	The Permittee shall restore any trails impacted by the land-use operation by removing fallen trees and any other obstructions from the trails.	TRAILS RESTORATION

26(1)(p) Display of Permits and Permit Numbers

76. The Permittee shall keep a copy of this Permit on hand at all times during this land-use operation. **COPY OF PERMIT**

26(1)(q) Biological and Physical Protection of the Land

77. A minimum of 60 days prior to commencement of Construction of camp(s), the Permittee shall submit a revised Closure and Reclamation Plan to the Board for approval. The Plan shall be in accordance with the Mackenzie Valley Land and Water Board and Aboriginal Affairs and Northern Development Canada's *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories*. **SUBMIT REVISED PLAN**
78. If any plan is not approved by the Board, the Permittee shall revise the plan according to the Board's direction and re-submit it to the Board for approval. **RESUBMIT PLAN**
79. The Permittee shall adhere to the **Engagement Plan**, once approved, and shall annually review the plan and make any necessary revisions to reflect changes in operations or as directed by the Board. Revisions to the plan shall be submitted to the Board for approval. **ENGAGEMENT PLAN**
80. All revised plans submitted to the Board shall include a brief summary of the changes made to the plan. **SUMMARY OF CHANGES**



Mackenzie Valley Land and Water Board
7th Floor - 4922 48th Street
P.O. Box 2130
YELLOWKNIFE NT XIA 2P6
Phone (867) 669-0506
FAX (867) 873-6610

Reasons for Decision

Issued pursuant to paragraph 40(2)(c) of the Mackenzie Valley Land Use Regulations (MVLUR) and section 121 of the *Mackenzie Valley Resource Management Act* (MVRMA)

Land Use Permit Application	
Preliminary Screener	MVLWB
Reference/File Number	MV2018C0023
Company	TerraX Minerals Inc.
Project	Mineral Exploration, Yellowknife, NT
Date of Decision	January 17, 2019

These Reasons for Decision set out the Mackenzie Valley Land and Water Board’s (the Board or MVLWB) decision on an Application made by TerraX Minerals Inc. (TerraX) to the Board on January 17, 2019 for Land Use Permit (Permit) MV2018C0023.

1.0 Background

On November 30, 2018, TerraX Mineral Inc. (TerraX) submitted Applications for a new Land Use Permit (Permit) MV2018C0023 and new Water Licence (Licence) MV2018L2-0006, which were received by the Board on December 3, 2018. These Applications are to conduct mineral exploration including diamond drilling, use of equipment, vehicle, and machines, use and storage of fuel, construction, operation, and maintenance of camp(s), winter road, and access road, withdrawal of water, deposit of waste, and progressive reclamation and associated closure activities. TerraX’s Yellowknife City Gold Project (YCGP) is located immediately east, south and north of the City of Yellowknife and covers 782.23 square kilometers. These activities are located within a Non-Federal area. Currently, TerraX is conducting mineral exploration activities under two Land Use Permits (Permits): MV2014C0005 and MV2016C0038. Permit MV2014C0005 was issued to TerraX on May 7, 2015 to conduct mineral exploration at the Northbelt and Walsh Lake properties, while MV2016C0038 was issued for the Southbelt property area. As TerraX has acquired additional mineral claims and leases, and plans to expand their mineral exploration project, they have applied for a new Permit MV2018C0023 to encompass the area authorized under both current Permits (MV2014C0005 and MV2016C0038), as well as additional property not included in the two existing Permits. Therefore, TerraX has applied to have one Permit (MV2018C0023) covering their entire project area, and a Type B Water Licence (Licence) MV2018L2-0006 Application is to use water for additional drilling over the expanded property. TerraX plans to request to close the existing Permits if the new authorizations are issued. The Licence MV2018L2-0006 Application is still going through the regulatory process, and the Board will consider the Licence Application separately from the Permit Application.

TerraX has applied for a term of 5 years for the Permit, with a desire for an extension. TerraX is conducting mineral exploration, and would like the maximum term possible for a Land Use Permit in order to gather as much information as possible from their drilling program, which may take many years. Subsections 26(5)

of the MVLUR allows for a Permit term of not more than five years. After reviewing the submissions made during this regulatory process, the Board has determined an appropriate term for this undertaking is 5 years.

2.0 Public Review

- December 3, 2018 – Application received;
- December 7, 2018 – Application deemed complete and review commenced;
- December 27, 2018 – Reviewer comments and recommendations due and received;
- January 3, 2019 – Responses due and received;
- **January 17, 2019 – Application presented to the Board for decision, and day 41 of the 42-day timeline.**

3.0 Adequacy of Management Plans

A Waste Management Plan, Spill Contingency Plan, and Engagement Plan were included with the Application. The Board decided that these Plans meet applicable guidelines and sufficiently reflect the scope of the proposed activities.

In addition to the required plans listed above, TerraX also submitted a Closure and Restoration Plan (also called a Closure and Reclamation Plan), an Exploration Plan, a Wildlife Management Plan, and an Archaeological Chance Find Procedure. The Board have included the Closure and Reclamation Plan as a requirement of the Permit, but the other plans have not been included in the Permit.

During the public review, the Government of the northwest Territories – Environment and Natural Resources (GNWT-ENR) requested minor updates to the Waste Management Plan and Spill Contingency Plan. The GNWT-ENR noted that the Waste Management Plan was not clear on what types and quantities of waste are expected before as opposed to after the proposed camp is established (GNWT comment-72), and that a table was missing from the Spill Contingency Plan (GNWT comment-74). TerraX responded to these comments and recommendations by submitting updated plans. The Board notes that the updated Waste Management Plan, version 2, and Spill Contingency Plan, version 2, have addressed the recommendations requested by ENR.^{1,2}

4.0 Security

TerraX included a security calculation using RECLAIM, and determined a total reclamation cost of \$231,252.00 under the Permit. TerraX proposed that the security be written into the Permit using a phased approach, with operational triggers requiring additional security to be posted. These triggers are a) Prior to the commencement of land use operations, b) Prior to the use of more than 6 diamond drills, and c) Prior to the construction and operation of a camp. The GNWT commented that they agree with the phased estimate provided by TerraX. The Board notes that TerraX worked closely with the GNWT on developing the phased security estimate prior to it being submitted to the Board. The GNWT-ENR recommended that the Board adopt the staged security estimate provided by TerraX. The Board agrees with the security proposed by TerraX and the GNWT-ENR. The Board also agrees with the triggers set for each phase of security required as they respond operationally to the Project's activities. More details on the Board's decision is provided in section 5.0 below. No concerns were raised during the public review regarding security.

¹ See Waste Management Plan Version 2 ([hyperlink](#)), dated January 3, 2019.

² See Spill Contingency Plan Version 2 ([hyperlink](#)), dated January 3, 2019

The previous Permit MV2014C005 and MV2016C0038 both require security of \$70,000 respectively to be posted.

The Board has determined that the total security deposit amount shall be \$231,252.00 under the Permit.

5.0 Decision

In rendering its decision, the Board is satisfied that:

- notice of the Application was given in accordance with sections 63 and 64 of the MVRMA. The Board is satisfied that a reasonable period of notice was given to communities and First Nations so comments could be provided to the Board;
- the development has been screened pursuant to the MVRMA;
- any potential adverse environmental effects are insignificant or mitigable with known technology; and,
- there is no likelihood that the proposed development might be a cause of public concern.

After reviewing the evidence and submissions of TerraX, the written comments and submissions received by the Board, and the Staff Report prepared for the Board, the Board, having due regard to the facts, circumstances, the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and Regulations made thereunder, has determined that Land Use Permit MV2018C0023 be issued subject to the term, scope, definitions, and conditions contained therein. The Board's determinations and reasons for this decision are set out below.

- The Board is satisfied that appropriate consultation has been conducted and that advice has been sought and considered, in accordance with sections 63 and 64 of the MVRMA.
- The use of land proposed by TerraX is of a nature contemplated by the MVRMA.
- The operation will likely contribute to the socio-economic well-being and economic development of the region.
- The Board has reviewed the information contained in the January 7, 2019 Staff Report regarding environmental impacts and/or public concerns.
- The scope of the Permit ensures TerraX is entitled to conduct activities which have been applied for and screened by the Board. In setting the scope, the Board endeavored to provide enough detail to identify and describe the authorized activities without being unduly restrictive or prescriptive, and to allow for project flexibility throughout the life of the Permit.
- The conditions set forth in the Permit have been imposed to address the Board's statutory responsibilities and ensure the land-use operation is conducted in a manner which ensures impacts to surrounding lands and waters are minimized.
- The Board has approved the Waste Management Plan (Version 2), Spill Contingency Plan (version 2), Engagement Plan, and Closure and Reclamation Plan because they meet the applicable guidelines and sufficiently reflect the scope of the proposed activities.
- The definitions and conditions in the Permit are from the MVLWB's *Standard Land Use Permit Conditions Template* (Standard Template), and are not discussed in detail in these reasons unless notable due to recommendations or concerns raised by reviewers. After considering the information gathered through the public review, the Board made the following changes, with rationale, to the conditions:

Condition	Change	Rationale
Private Property	The Board has decided to include a setback of 50 m	TerraX requested that the standard condition 'Private Property' have a setback distance of 50 metres. The previous Permit MV2014C0005 did not contain this condition, and Permit MV2016C0038 had a distance of 300 m. During the review period, the Lands Inspector recommended that a distance of 50 m be granted. No other comments or recommendations were received on the 'Private Property' condition. As such, the Board has decided to include a setback of 50m.
Existing Camp	Removed	There is currently no existing TerraX campsite that could be utilized, and therefore the Board has determined that this condition is not applicable.
Fire-fighting Equipment	Removed	The Lands Inspector recommended the removal of the 'Fire-fighting Equipment' standard condition with the rationale that The Forest Protection Act, Forest Management Regulations, and the Government of the Northwest Territories' <i>Forest Fire Prevention and Suppression Guidelines for Industrial Activities</i> dictate the requirements of a person and therefore Statutes and Guidelines should not be repeated in a land use permit. The Board understands that TerraX is still required to comply with any applicable fire related legislations even if the 'Fire-fighting Equipment' condition is removed from the Permit. Therefore, the Board agrees with the Lands Inspector's recommendation and rationale and decided to remove this condition.
Archaeological Buffer	The Board has decided to include a buffer of 30 m	TerraX requested a setback of 30 m in their Applications. During the review period, the GNWT-ECE recommended the Board approve the buffer distance of 30 m, and the Lands Inspector agreed, and had no concerns with that distance. This distance is also consistent with previously issued permits. As such, the Board has decided to include a buffer of 30 m.
Archaeological Overview	No change. The Board has decided to maintain the 30-day timeline.	During the review, the GNWT-ECE recommended a timeline of 30 days be used for the 'Archaeological Overview' condition. The Lands Inspector also recommended a timeline of 30 days. This timeline is consistent with TerraX's Permit MV2016C0038. No other comments or recommendations were made during the public review on this section of the draft Permit conditions. As such, the Board has decided to include a timeline of 30 days.
Security Deposit	The Board set a phased security requirement, which totals \$231,252.00 under the Permit.	TerraX proposed that the security be written into the Permit using a phased approach, with operational triggers requiring additional security to be posted. These triggers are a) Prior to the commencement of land use operations, b) Prior to

		<p>the use of more than 6 diamond drills, and c) Prior to the construction and operation of a camp. The GNWT commented that they agree with the phased estimate provided by TerraX. The Board notes that TerraX worked closely with the GNWT on developing the phased security estimate prior to it being submitted to the Board. The GNWT-ENR recommended that the Board adopt the staged security estimate provided by TerraX. The Board agrees with the security proposed by TerraX and the GNWT-ENR. No concerns were raised during the public review regarding security. As such the Board set security totalling \$231,252.00 based on the following schedule:</p> <p>a) Prior to the commencement of land use operations, the Permittee shall post and maintain a total security deposit of \$130,123.00;</p> <p>b) Prior to the use of more than 6 diamond drills, the Permittee shall post and maintain an additional security deposit in the amount \$63,356.00; and</p> <p>c) Prior to the construction and operation of a camp, the Permittee shall post and maintain an additional security deposit in the amount of \$37,773.00.</p> <p>The Board notes that this wording also allows flexibility for TerraX to trigger condition 53c) prior to 53b) because during the review TerraX confirmed that the requirement for a camp may precede the use of more than 6 diamond drills.</p>
Check for Leaks	Revised to 'once per day, while operating.'	<p>During the review period, the Lands Inspector recommended the removal of the 'Check for Leaks' condition, as compliance with this condition cannot occur by a Permittee during seasonal shutdowns of land use operations. The Lands Inspector also noted that other conditions in the land use permit and Environment Canada Regulations mitigate the potential for environmental concerns to arise. The Board understands the Lands Inspector's concerns regarding the enforceability of this condition during seasonal shutdowns but stresses the importance of this condition to help prevent fuel leaks to the environment. Therefore, the Board has decided to revise this condition to require the examination of all Fuel Storage Containers or Tanks to a minimum of "once per day, while operating". The Board decided on the frequency of 'once per day' as it is consistent with the Permits issued in the past. The Board added "while operating" to the condition to address the Lands Inspector's concern of compliance during seasonal shutdowns.</p>

Maximum Fuel on Site	Revised from 105,000 litres to 118,130 litres	TerraX revised this amount during the review period in response to the Lands Inspector's comment. No other comments or recommendations were made during the public review on this section of the draft Permit conditions. As such, the Board has updated the maximum fuel on site accordingly.
Disposal of Overburden	Removed	During the review period, the Lands Inspector recommended the removal of the 'Disposal of Overburden' condition, as it is meant for quarrying operations and is not relevant to the scope of this project. As such, the Board decided to remove this condition from the Permit.
Submit Revised Plan	Revised	The Board has decided to require the Closure and Reclamation Plan to be revised 60 days prior to commencement of Construction of camp(s) for Board approval. This is to have the Closure and Reclamation Plan be updated and submitted in accordance with the Mackenzie Valley Land and Water Board and Aboriginal Affairs and Northern Development Canada's <i>Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories</i> .

6.0 Conclusion

Land Use Permit MV2018C0023 contains provisions that the Board deems necessary to ensure and monitor compliance with the MVRMA and the Regulations made thereunder, and to provide appropriate safeguards in respect of TerraX's use of the land affected by the Permit.

SIGNATURE

Mackenzie Valley Land and Water Board

Mavis Cli-Michaud, Chair

January 17, 2019

Date