



Box 32, Wekweètì, NT X0E 1W0
Tel: 867-713-2500 Fax: 867-713-2502

#1-4905 48th Street, Yellowknife, NT X1A 3S3
Tel: 867-765-4592 Fax: 867-765-4593
www.wlwb.ca

LAND USE PERMIT

Permit Class	Permit No	Amendment No
A	W2016E0004	

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

Government of the Northwest Territories
Department of Infrastructure (GNWT-INF)

Permittee

To proceed with the land use operation described in application of:

Signature Michael Conway	Date January 7, 2019
Type of Land use Operation Construction, maintenance, and operation of an all-season highway, including use of associated quarries, access roads, camps, fuel storage, and heavy equipment	
Location Near Km 196 along Highway #3 to Community of Whatì	

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

Dated at Yellowknife this 30th day of May, 2019

Signature Chair

Signature Witness

Effective Date

May 30, 2019

Expiry Date

May 29, 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 by the Board.

Conditions Annexed to and Forming Part of Land Use Permit # W2016E0004

Part A: Scope of Permit

1. This Permit entitles the Permittee to conduct the following land-use operations:
 - a) Construction, maintenance, and operation of an all-season highway;
 - b) development and operation of quarries, including associated access roads;
 - c) the operation of construction camps, including equipment, fuel and material storage areas and maintenance facilities;
 - d) the use of explosives;
 - e) the use of self-propelled earth-moving equipment, and vehicles and machines over 10 tons;
 - f) the establishment of a petroleum storage facility;
 - g) the use of earth-drilling machinery;
 - h) construction of access roads and winter roads; and
 - i) construction of bridges and culverts.
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, Condition 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, Tłıchq, or Municipal laws.

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

Act - the *Mackenzie Valley Resource Management Act*.

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 Wek'èezhìi Land and Water Board established in Section 57.1(1) of the *Mackenzie Valley Resource Management Act*.

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

Dogleg - the clearing of a line, trail, or right-of-way that is curved sufficiently so that no part of the clearing beyond the curve is visible when approached from either direction.

Drilling Fluids - any liquid mixture of water, sediment, drilling muds, chemical additives or other wastes that are pumped down hole while drilling and are specifically related to drilling activity.

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 *Mackenzie Valley Resource Management 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.

Spill Contingency Plan - a document, developed in accordance with Aboriginal Affairs and Northern Development Canada’s *Guidelines for Spill Contingency Planning*, 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 300 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 conduct a quarry operation within 100 metres of the Ordinary High-Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector. | QUARRY SETBACK |
| 5. | A minimum of 90 days prior to the commencement of Construction, the Licensee shall submit to the Board for approval a Quarry Operations Plan . The Licensee shall comply with the Quarry Operations Plan , once approved. | QUARRY OPERATIONS PLAN |
| 6. | The Permittee shall not construct parallel lines or roads, unless an existing line or road cannot be used. | PARALLEL ROADS |
| 7. | The Permittee shall not conduct this land-use operation on any lands not designated in the complete application. | LOCATION OF ACTIVITIES |
| 8. | Prior to the commencement of the land-use operation, the Permittee shall accompany an Inspector during an inspection of the proposed land-use area. | INSPECT LOCATIONS |
| 9. | The Permittee shall confine the width of the right of way to a maximum of 60 metres for the Tlicho All-Season Road, and to 12 metres for access roads. | WIDTH RIGHT-OF-WAY |

26(1)(b) Time

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| 10. | At least 48 hours prior to the commencement of the land-use operation, the Permittee's Field Supervisor shall contact an Inspector at (867) 767-9188. | CONTACT INSPECTOR |
| 11. | 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 |

12.	At least ten days prior to the completion of the land-use operation, the Permittee shall advise an Inspector of: (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
13.	The Board, for the purpose of this operation, designates April 15 as spring break-up.	SPRING BREAK-UP
26(1)(c) Type and Size of Equipment		
14.	The Permittee shall not use any equipment except of a similar type, size, and number to that listed in the complete application, unless otherwise authorized in writing by an Inspector.	ONLY APPROVED EQUIPMENT
15.	The Permittee shall maintain fire-fighting equipment at the site.	FIRE-FIGHTING EQUIPMENT
26(1)(d) Methods and Techniques		
16.	When possible, the Permittee shall Dogleg quarry access roads that approach Watercourses or public roads.	DOGLEG APPROACHES
17.	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
18.	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
19.	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
20.	Prior to the expiry date of this Permit, the Permittee shall replace all excavated material, unless otherwise authorized in writing by an Inspector.	EXCAVATED MATERIAL
21.	The Permittee shall leave a buffer strip of undisturbed vegetation at least 30 metres in width between cleared areas and public roads, except where quarries overlap the road and at existing cleared areas or limited vegetation areas.	TREE SCREEN
26(1)(e) Type, Location, Capacity, and Operation of All Facilities		
22.	The Permittee shall ensure that the land use area is kept clean at all times.	CLEAN WORK AREA
23.	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

26(1)(f) Control or Prevention of Ponding of Water, Flooding, Erosion, Slides, and Subsidence of Land

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| 24. | The Permittee shall install and maintain culverts such that scouring does not occur. | CULVERT SIZE |
| 25. | A minimum of 90 days prior to commencement of Construction, the Licensee shall submit to the Board, for approval, a revised Permafrost Management Plan . The Licensee shall comply with the Permafrost Management Plan , once approved. | PERMAFROST MANAGEMENT PLAN |
| 26. | The land-use operation shall not cause obstruction to any natural drainage. | NATURAL DRAINAGE |
| 27. | The Permittee shall minimize erosion by installing erosion control structures as the land-use operation progresses. | PROGRESSIVE EROSION CONTROL |
| 28. | The Licensee shall comply with the approved Erosion and Sediment Control Plan . | EROSION AND SEDIMENT CONTROL PLAN |
| 29. | 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 WELL |
| 30. | The Permittee shall prepare the site in such a manner as to prevent rutting of the ground surface. | PREVENTION OF RUTTING |
| 31. | The Permittee shall suspend overland travel of equipment or vehicles at the first sign of rutting. | SUSPEND OVERLAND TRAVEL |
| 32. | 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 |
| 33. | The Permittee shall not use any material other than clean water and snow in the construction of ice bridges. | ICE BRIDGE MATERIALS |
| 34. | The Permittee shall not use any materials other than clean snow and water in the construction of snow fills. | SNOWFILL MATERIALS |
| 35. | 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 |
| 36. | 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 |
| 37. | The Permittee shall not cut any stream bank, unless otherwise approved by the Board. | STREAM BANKS |

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| 38. | The Permittee shall minimize approach grades on all Watercourse crossings, unless otherwise approved by the Board. | MINIMIZE APPROACH |
| 39. | The Permittee shall not ford wet streams, unless otherwise approved by the Board. | NO FORDING OF STREAMS |
| 40. | The Permittee shall slope the sides of Waste material piles, excavations, and embankments — except in solid rock — to a minimum ratio of 2:1 vertical, unless otherwise authorized in writing by an Inspector. | EXCAVATION AND EMBANKMENTS |
| 41. | The Permittee shall not remove vegetation or operate heavy equipment within 100 metres of the Ordinary High-Water Mark of any Watercourse except as described in the application. | WATERCOURSE BUFFER |
| 42. | The Permittee shall not excavate land within 100 metres of the Ordinary High-Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector. | EXCAVATE NEAR WATERCOURSE |
| 26(1)(g) Use, Storage, Handling, and Ultimate Disposal of Any Chemical or Toxic Material | | |
| 43. | 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 |
| 44. | 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 |
| 45. | 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 |
| 46. | The Permittee shall remove all Drilling Waste containing Toxic Material as per the approved Waste Management Plan . | DRILLING WASTE DISPOSAL |
| 47. | The Permittee shall not allow any Drilling Waste to spread to the surrounding lands or Watercourses. | DRILLING WASTE CONTAINMENT |
| 48. | 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 |
| 49. | The Permittee shall maintain a record of all spills. For all reportable spills, in accordance with the GNWT <i>Spill Contingency Planning and Reporting Regulations</i> , the Permittee shall: | REPORT SPILLS |
| | (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.	
50.	The Permittee shall dispose of all Toxic Material as described in the approved Waste Management Plan .	WASTE CHEMICAL DISPOSAL
51.	The Permittee shall dispose of all Waste petroleum products as described in the approved Waste Management Plan .	WASTE PETROLEUM DISPOSAL
	26(1)(h) Wildlife and Fish Habitat	
52.	The Permittee shall take all reasonable measures to prevent damage to wildlife and fish Habitat during this land-use operation.	HABITAT DAMAGE
53.	A minimum of 90 days prior to commencement of Construction, the Licensee shall submit to the Board, for approval, a revised Wildlife Management and Monitoring Plan . The Licensee shall comply with the Wildlife Management and Monitoring Plan , once approved.	WILDLIFE MANAGEMENT AND MONITORING PLAN
54.	A minimum of 30 days prior to the commencement of Construction, the Permittee shall submit a draft Habitat Offset Plan to the Wek'èezhìi Renewable Resources Board.	HABITAT OFFSET PLAN (DRAFT)
55.	A minimum of 90 days prior to public use of the road, the Permittee shall submit a final Habitat Offset Plan to the Wek'èezhìi Renewable Resources Board for review.	HABITAT OFFSET PLAN (FINAL)
	26(1)(i) Storage, Handling, and Disposal of Refuse or Sewage	
56.	A minimum of 90 days prior to the commencement of Construction, the Licensee shall submit to the Board for approval a Waste Management Plan in accordance with the Mackenzie Valley Land and Water Board's <i>Guidelines for the Development of a Waste Management Plan</i> . The Plan shall describe how all Waste streams associated with the Project are managed, including references to other plans as necessary.	WASTE MANAGEMENT
57.	The Permittee shall keep all garbage and debris in a secure container until disposal.	GARBAGE CONTAINER
58.	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
59.	The Permittee shall dispose of all Sewage and Greywater into a Sump at least 100 metres from the Ordinary High-Water Mark of any Watercourse.	SEWAGE DISPOSAL - SUMP
60.	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	
61.	The Permittee shall not operate any vehicle or equipment within at least 30 metres of a known or suspected historical or archaeological site or burial ground. Where possible, the Permittee shall maintain a 150 metre	ARCHAEOLOGICAL BUFFER

	distance from a known or suspected historical or archaeological site or burial ground.	
62.	The Permittee shall not knowingly remove, disturb, or displace any archaeological specimen or site.	SITE DISTURBANCE
63.	The Permittee shall, where a suspected archaeological or historical site, or burial ground is discovered: (a) immediately suspend operations on the site and implement the Archaeological Site Chance Find Protocol; and (b) notify the Board at (867) 765-4592, the Inspector at (867) 767-9188, and the Prince of Wales Northern Heritage Centre at (867) 767-9347 ext. 71250 or ext. 71251.	SITE DISCOVERY AND NOTIFICATION
64.	The Licensee shall comply with the approved Archaeological Site Chance Find Protocol .	ARCHAEOLOGICAL SITE CHANCE FIND PROTOCOL
65.	Prior to any new land disturbance, the Permittee shall consult with the Prince of Wales Northern Heritage Centre to identify if an Archaeological Impact Assessment of the sites where disturbance is planned is required. The Permittee shall submit a summary report to the Board, the Inspector, and the Prince of Wales Northern Heritage Centre should an Archaeological Impact Assessment be required. 26(1)(k) Objects and Places of Recreational, Scenic, and Ecological Value <i>Intentionally left blank</i> 26(1)(l) Security Deposit <i>Intentionally left blank</i> 26(1)(m) Fuel Storage	AIA
66.	The Permittee shall: (a) examine all Fuel Storage Containers and Tank for leaks; and (b) repair all leaks immediately.	REPAIR LEAKS
67.	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 approved by the Board or authorized in writing by an Inspector.	FUEL NEAR WATER
68.	The Permittee shall ensure that all Fuel Storage Containers have adequate Secondary Containment.	FUEL SECONDARY CONTAINMENT
69.	The Permittee shall set up all refueling points with Secondary Containment.	SECONDARY CONTAINMENT - REFUELING
70.	The Permittee shall not allow petroleum products to spread to surrounding lands or Watercourses.	FUEL CONTAINMENT

71.	The Permittee shall locate mobile fuel facilities on land when the facilities are stationary for more than 12 hours.	FUEL ON LAND
72.	The Permittee shall mark all Fuel Storage Containers and Tanks with the Permittee's name.	MARK CONTAINERS AND TANKS
73.	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
74.	The Permittee shall have a maximum 106,000 litres of fuel stored on the land use area at any time, unless otherwise authorized in writing by the Board.	MAXIMUM FUEL ON SITE
75.	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
76.	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
77.	The Licensee shall comply with the Spill Contingency Plan , developed in accordance with <i>Indian and Northern Affairs Canada's Guidelines for Spill Contingency Planning</i> , once approved. The Spill Contingency Plan shall include a description of proper work practices for fueling equipment and handling petroleum.	SPILL CONTINGENCY PLAN
78.	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
79.	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
80.	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		
81.	Prior to the expiry date of this Permit, the Permittee shall progressively dispose of all brush and trees and shall complete all brush disposal.	BRUSH DISPOSAL/ TIME
82.	The Permittee shall not clear areas larger than identified in the complete application.	MINIMIZE AREA CLEARED
26(1)(o) Restoration of the Lands		
83.	The Permittee shall dispose of all overburden as instructed by an Inspector.	DISPOSAL OF OVERBURDEN
84.	Prior to the expiry date of this Permit, the Permittee shall complete all cleanup and restoration of the lands used.	FINAL CLEANUP AND RESTORATION
85.	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

86.	The Permittee shall carry out progressive reclamation of disturbed areas as soon as it is practical to do so.	PROGRESSIVE RECLAMATION
87.	Unless otherwise agreed to in the draft or final Offset Plan, 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	
88.	The Permittee shall display a copy of this Permit in each campsite established to carry out this land-use operation.	DISPLAY PERMIT
	26(1)(q) Biological and Physical Protection of the Land	
89.	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
90.	A minimum of 90 days prior to commencement of Construction, the Licensee shall submit to the Board, for approval, a revised Engagement Plan . The Licensee shall comply with the Engagement Plan , once approved.	ENGAGEMENT PLAN
91.	All revised plans submitted to the Board shall include a list of notable revisions to the Plan.	SUMMARY OF CHANGES
92.	In each management plan submitted to the Board, the Licensee is to identify how it has incorporated adaptive management as outlined in Appendix B of the Report of EA or provide a rationale for why an adaptive management framework was not adopted.	ADAPTIVE MANAGEMENT