



GWICH'IN LAND AND WATER BOARD

Box 2018 Inuvik NT X0E 0T0

Ph 867-777-7960

Fx 867-777-7970

www.glwb.com

Land Use Permit

Permit Number: G09F001

Permit Class: A

Subject to the Mackenzie Valley Land Use Regulations and the terms and conditions annexed to and forming part of this Land Use Permit, the Gwich'in Land and Water Board (hereinafter referred to as the Board) authority is hereby granted to:

Shamrock Tomahawk Ltd.
Box 110 Aklavik NT X0E 0A0
(hereinafter referred to as the Permittee)

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

Applicant: Charlie Furlong
Date: Friday, January 16, 2009
Type of Land Use Operation: Private Road and Quarry
Location: Willow River - 68 23 59 N 133 18 31 W

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

Dated at Inuvik in the Northwest Territories this 28TH day of January 2009.

Paul Sullivan
Chair
Gwich'in Land and Water Board

Monday, February 2, 2009
Commencement Date

Monday, April 15, 2013
Expiry Date

It is a condition of this Land Use Permit that the Permittee comply the provisions of the Mackenzie Valley Resource Management Act and Regulations and the terms and conditions annexed to and forming part of this Land Use Permit. A failure to comply may result in the suspension or cancellation of the Land Use Permit by the Gwich'in Land and Water Board.

CONDITIONS ANNEXED TO AND FORMING PART OF LAND USE PERMIT: G09F001

PART A: SCOPE OF LAND USE PERMIT

1. This Land Use Permit entitles **Shamrock Tomahawk Ltd.** to conduct the following activities:

To construct a winter road from 68 07 53 N 135 21 13 W on the Husky Channel to 68 12 22 N 135 28 18 W on the Willow River, a distance of approximately 10 kilometres, to the area known as Quarry Site 467 to excavate and remove 20,000 cubic metres of gravel to Aklavik.
2. This Land Use 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 Land Use Permit.
3. Compliance with the terms and conditions of this Land Use Permit does not absolve the Permittee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

PART B: DEFINITIONS

"Act" means the Mackenzie Valley Resource Management Act.

"Board" means the Gwich'in Land and Water Board established under Part 3 of the Mackenzie Valley Resource Management Act.

"Land Use Inspector" means an Inspector designated by the Minister under the Mackenzie Valley Resource Management Act.

"Watercourse" means 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 OF PERMIT

26 (1) (A) THE LOCATION AND AREA OF LANDS THAT MAY BE USED IN THIS LAND-USE OPERATION

- | | |
|---|-------------------------------------|
| 1. The Permittee shall not conduct this land use operation on any lands not designated in the accepted application, unless otherwise authorized in writing by the Board. | PLANS |
| 2. The Permittee shall:
(a) offset vehicle travel in areas without a snow covered surface; and
(b) shall confine the line to a maximum width of ten (10) metres, unless otherwise authorized in writing by a Land Use Inspector. | OFFSET VEHICLE TRAVEL |
| 3. The Permittee shall remove from all lands all scrap metal, discarded machinery and parts, barrels and kegs, buildings and building materials. | REMOVE WASTE MATERIAL |
| 4. The Permittee shall locate all lines, trails and rights-of-way to be constructed parallel to streams a minimum of thirty (30) meters from any stream except at crossings, unless otherwise authorized in writing by a Land Use Inspector. | PARALLELING STREAMS |
| 5. The Permittee shall not conduct a quarry operation within one hundred (100) metres of the normal high water mark of any water body, unless otherwise authorized in writing by a Land Use Inspector. | LOCATION OF QUARRY OPERATION |
| 6. The Permittee shall only excavate and stockpile in areas designated in the accepted application, unless otherwise authorized in writing by a Land Use Inspector. | EXCAVATE AND STOCKPILE |

26 (1) (B) THE TIMES AT WHICH ANY PORTION OF THIS LAND-USE OPERATION MAY BE CARRIED ON

- | | |
|--|------------------------------------|
| 7. The Permittee's Field Supervisor shall contact or meet with a Land Use Inspector at the Inuvik office of the Department of Indian Affairs and Northern Development, - (867) 777-3361 - and the Gwich'in Land and Water Board, - (867) 777-7960 - at least forty-eight (48) hours prior to the commencement of this land use operation. | CONTACT INSPECTOR AND BOARD |
| 8. The Permittee shall provide, in writing, to a Land Use Inspector and the Board, at least forty-eight (48) hours prior to commencement of this land use operation, the following information:
(a) person, or persons, in charge of the field operation to whom notices, orders, and reports may be served;
(b) alternates; and
(c) all methods for contacting the above person(s). | IDENTIFY AGENT |
| 9. The Permittee shall advise a Land Use Inspector and the Board at least ten (10) days prior to the completion of this land use operation of:
(a) the plan for removal or storage of equipment and materials; and
(b) when final clean-up and restoration of the land used will be completed. | REPORTS BEFORE REMOVAL |
| 10. The Permittee shall not conduct any overland movement of equipment and vehicles after 0800 hours local time on April 15 th , unless otherwise authorized in writing by a Land Use Inspector. | SHUT-DOWN DATE |
| 11. The Board, for the purpose of this land use operation, designates April 15 th , as spring break-up. | SPRING BREAK-UP |

- | | | |
|--|--|------------------------------------|
| 12. | The Permittee shall remove all ice bridges prior to spring break-up or completion of this land use operation, unless otherwise authorized in writing by a Land Use Inspector. | REMOVE ICE BRIDGE |
| 13. | The Permittee shall remove all snow fills from stream crossings prior to spring break-up or completion of this land use operation, unless otherwise authorized in writing by a Land Use Inspector. | REMOVE SNOW FILLS |
| 14. | The Permittee shall commence and foster revegetation on all parts of the land used, as may be directed by a Land Use Inspector, within one (1) year of the completion of this land use operation. | RE-ESTABLISH VEGETATION |
| 15. | The Permittee shall complete all clean-up and restoration of the lands used prior to the expiration date of this Land Use Permit. | CLEAN-UP |
| 16. | The Land Use Inspector and/or the Board reserve the right to impose closure of any area to the Permittee in periods when dangers to natural resources are severe. | CLOSURE |
| 26 (1) (C) THE TYPE AND SIZE OF EQUIPMENT THAT MAY BE USED IN THIS LAND-USE OPERATION | | |
| 17. | The Permittee shall not use any equipment except of the type, size, and number that is listed in the accepted application, unless otherwise authorized in writing by a Land Use Inspector. | ONLY APPROVED EQUIPMENT |
| 18. | The Permittee shall equip bulldozer blades used in this land use operation with "mushroom" type shoes or a similar type of device, which shall be extended ten (10) centimetres below the cutting edge of the blade to protect the ground surface and vegetation. | BULLDOZER BLADES AND SHOES |
| 26 (1) (D) METHODS AND TECHNIQUES TO BE EMPLOYED BY THE PERMITTEE IN CARRYING OUT THIS LAND-USE OPERATION | | |
| 19. | The Permittee shall scout proposed lines and routes to select the best location for crossing streams and avoiding terrain obstacles prior to the movement of any vehicle that exerts pressure on the ground in excess of 35 Kpa. | DETOURS AND CROSSINGS |
| 20. | The Permittee shall not conduct vehicle travel in areas without snow-covered surfaces. | VEHICLE TRAVEL |
| 21. | The Permittee shall construct and maintain winter roads with a minimum of ten (10) centimetres of packed snow at all times during this land use operation. If this cannot be done, the Permittee shall construct Ice Roads in a manner approved by a Land Use Inspector. | SNOW ROADS/ ICE ROADS |
| 22. | The Permittee shall dogleg lines, trails and rights-of-way that approach lakes, streams or public roads, as specified in writing by a Land Use Inspector. | DOGLEG APPROACHES |
| 23. | The Permittee shall slope the sides of excavations and embankments, except in solid rock, to a horizontal/vertical ratio of 2:1, unless otherwise authorized in writing by a Land Use Inspector. | EXCAVATIONS AND EMBANKMENTS |
| 24. | The Permittee shall slope the sides of waste material piles to a horizontal/vertical ratio of 2:1, unless otherwise authorized in writing by a Land Use Inspector. | WASTE MATERIAL PILES |

- | | |
|--|---|
| 25. The Permittee shall not clear areas larger than identified in the accepted application. | MINIMIZE AREA
CLEARED |
| 26. The Permittee shall not store material other than that required for immediate use on the ice surface of water bodies. | STORAGE ON ICE |
| 27. Stripping of overburden must be approved by a Land Use Inspector prior to commencement of the quarrying operation. | STRIPPING OF
OVERBURDEN |
| 26 (1) (E) THE TYPE, LOCATION, CAPACITY AND OPERATION OF ALL
FACILITIES TO BE USED BY THE PERMITTEE IN THIS LAND-USE
OPERATION | |
| 28. The Permittee shall adhere to all mitigation measures in the accepted application. | MITIGATION
MEASURES |
| 29. The Permittee shall ensure that the land use area is kept clean at all times. | CLEAN WORK
AREA |
| 26 (1) (F) METHODS TO BE USED TO CONTROL OR PREVENT
PONDING OF WATER, FLOODING, EROSION, SLIDES AND THE
SUBSIDENCE OF LAND | |
| 30. The Permittee shall minimize approach grades on all winter lake and/or stream crossings. | MINIMIZE
APPROACH |
| 31. The Permittee shall remove any obstruction to natural drainage caused by any part of this land use operation. | NATURAL
DRAINAGE |
| 32. The Permittee shall not cut any stream bank, unless otherwise authorized in writing by a Land Use Inspector. | STREAM BANKS |
| 33. The Permittee shall not use any material other than water and/or clean snow in the construction of ice bridges, ramps and snow fills. | ICE BRIDGE
MATERIALS |
| 34. The Permittee shall not use any material other than snow in the construction of snow fills. | SNOW FILL
MATERIALS |
| 35. The Permittee shall remove all snow fills from stream crossings prior to spring break-up or completion of this land use operation, unless otherwise authorized in writing by a Land Use Inspector. | REMOVE SNOW
FILLS |
| 36. The Permittee shall not allow any ice bridges to hinder the flow of water in any water body. | ICE BRIDGE |
| 37. The Permittee shall not use the bed of streams for access routes except for the purpose of crossing the streams, unless otherwise authorized by a Land Use Inspector. | STREAM BEDS –
ACCESS |
| 38. 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 |
| 39. The Permittee shall suspend overland travel of equipment or vehicles if rutting occurs. | SUSPEND
OVERLAND
TRAVEL |

40. The Permittee shall, when clearing land, save all vegetation removed from the land use area and place the vegetation over the land use area prior to the expiration date of this Land Use Permit. **SAVE VEGETAION**

41. The Permittee shall save the organic soil stripped from the excavation area. **SAVE ORGANIC SOIL**

42. The Permittee shall place the organic soil over the disturbed area prior to the expiration date of this Land Use Permit. **PLACE ORGANIC SOIL**

26 (1) (G) THE USE, STORAGE, HANDLING AND ULTIMATE DISPOSAL OF ANY CHEMICAL OR TOXIC MATERIAL TO BE USED IN THIS LAND-USE OPERATION

43. The Permittee shall not, in any circumstances, deposit or allow the deposit of any deleterious substances (including but not limited to fuels, lubricants, hydraulics, and coolants) of any type into any waters, or in any place under any conditions where the deleterious substances may enter any waters. **DEPOSITING DELETERIOUS SUBSTANCES**

44. The Permittee shall remove all garbage and debris from the land use area as specified in the accepted application, or as authorized in writing by a Land Use Inspector. **REMOVE GARBAGE**

45. The Permittee shall immediately report all spills to the 24 hour Spill Report Line (867) 920-8130 in accordance with instructions contained in the NWT SPILL REPORT form NWT 1752/0202. **REPORT CHEMICAL AND PETROLEUM SPILLS**

26 (1) (H) PROTECTION OF WILDLIFE AND FISH HABITAT

46. The Permittee shall not unnecessarily damage wildlife habitat in conducting this land use operation. **HABITAT DAMAGE**

47. The Permittee shall not feed or harass wildlife. **NO FEEDING OR HARRASSING WILDLIFE**

48. The Permittee shall not destroy or damage beaver dams. **BEAVER DAMS**

49. The Permittee shall not destroy or damage beaver lodges **BEAVER LODGES**

50. The Permittee shall not destroy or damage muskrat lodges. **MUSKRAT LODGES**

51. The Permittee shall use food handling and garbage disposal procedures that do not attract bears. Information about the latest bear detection and deterrent techniques can be obtained from Environment and Natural Resources in Inuvik at (867) 777-7308. **BEAR/MAN CONFLICT**

52. The Permittee shall not quarry to a depth below that of the water table. For greater certainty, the Permittee shall not quarry below existing pit floor. **QUARRY DEPTH**

53. The Permittee shall construct and maintain the water intake with an adequate screening device to prevent entrainment of fish. **PREVENT ENTRAINMENT**

54. The Permittee shall construct and maintain the water intake using the Department of Fisheries and Ocean's recommended 2.54 mm fine mesh size to prevent entrainment of fish. Other dimensions must follow DFO's Freshwater Intake End-of-Pipe Fish Screen Guidelines.

**PREVENT
ENTRAINMENT**

55. The Permittee shall cease operations when caribou are in the immediate vicinity of any area where this land use operation is being conducted.

**CARIBOU
HARRASSMENT**

56. The Permittee shall not, during the migration of caribou, locate any operation so as to block or cause substantial diversion of the migration, and shall cease any activity that may interfere with the migration, such as airborne surveys, or movement of equipment, until such time as the major migration has been completed.

**CARIBOU
MIGRATION**

26 (1) (I) THE STORAGE, HANDLING AND DISPOSAL OF REFUSE OR SEWAGE

26 (1) (J) PROTECTION OF HISTORICAL AND ARCHAEOLOGICAL SITES AND BURIAL GROUNDS

57. The Permittee shall not knowingly operate any vehicle within thirty (30) metres of a known or suspected historical or archaeological site or burial ground site.

**OPERATE
VEHICLE**

58. The Permittee shall not knowingly remove, disturb, or displace any known or suspected historical or archaeological site or specimen or burial ground.

**DISTURBANCE OF
SITE**

59. The Permittee shall immediately cease any activity which disturbs an historical or archaeological site or specimen or burial ground, and shall contact the Gwich'in Land and Water Board at (867) 777-7960, or the Prince of Wales Northern Heritage Centre at (867) 920-6182, and shall not continue without written authorization from the Board.

CONTACTS

60. The Permittee shall ensure that all persons working under authority of this Land Use Permit are aware of the conditions concerning historical or archaeological sites or specimens or burial grounds.

**NOTIFICATION
TO EMPLOYEES**

26 (1) (K) PROTECTION OF OBJECTS AND PLACES OF RECREATIONAL, SCENIC OR ECOLOGICAL VALUE

This section intentionally left blank.

26 (1) (L) POSTING OF SECURITY IN ACCORDANCE WITH SECTION 32

61. The Permittee shall deposit with the Minister a security deposit in the amount of \$0.00 pursuant to Section 32 of the Mackenzie Valley Land Use Regulations.

**SECURITY
DEPOSIT**

62. The Permittee shall be liable for any cost of damages over and above the amount of the security deposit.

**LIABILITY FOR
DAMAGES**

63. The Permittee shall be responsible for all costs to remediate the land used in this Land Use Permit. **RESPONSIBILITY FOR REMEDIATION**

26 (1) (M) THE ESTABLISHMENT OF PETROLEUM FUEL STORAGE FACILITIES

64. The Permittee shall ensure that adequate contingency plans and spill kits are in place, prior to commencement of this land use operation, to respond to any potential spills. **SPILL RESPONSE**

26 (1) (N) METHODS AND TECHNIQUES FOR DEBRIS AND BRUSH DISPOSAL

65. The Permittee shall progressively complete disposal of all debris and brush. **PROGRESSIVE DISPOSAL**
66. The Permittee shall not clear any trees. **NO CLEARING**

26 (1) (O) RESTORATION OF LANDS

67. The Permittee shall save the organic soil stripped from the excavation area and place the organic soil over the disturbed area prior to the completion of this land use operation or the expiration date of this Land Use Permit. **SAVE AND PLACE ORGANIC SOIL**

26 (1) (P) THE DISPLAY OF PERMITS AND PERMIT NUMBERS

68. The Permittee shall, at all times during the course of this land use operation, keep on hand a copy of this Land Use Permit. **COPY OF PERMIT**

26 (1) (Q) ANY OTHER MATTERS NOT INCONSISTENT WITH THE REGULATIONS, FOR THE PROTECTION OF THE BIOLOGICAL OR PHYSICAL CHARACTERISTICS OF THE LANDS

69. The Permittee shall ensure that all persons working under the authority of this Land Use Permit are aware of and will adhere to the conditions as stated herein. **NOTIFICATION TO ALL EMPLOYEES/ CONTRACTORS**
70. The Permittee shall not remove any material from below the normal high water mark of any water body, unless otherwise authorized in writing by a Land Use Inspector. **WORK IN WATER BODIES**
71. The Permittee shall utilize avoidance cutting techniques to the greatest extent possible. **AVOIDANCE CUTTING**
72. The Permittee shall use existing lines or roads to the greatest extent possible. **EXISTING LINES/ROADS**

FINAL PLAN

Every permittee shall, within 60 days after the completion of a land-use operation or the expiration of the permit, whichever occurs first, submit a final plan in duplicate to the Board and, where the land-use operation was carried out on private lands, to the landowner thereof, showing

- (a) the lands on which the land-use operation was conducted;
- (b) the location of
 - (i) lines, trails, rights-of-way and cleared areas that were used by the permittee during the land-use operation, specifying those that were cleared by the permittee and those that existed before the operation began,
 - (ii) buildings, structures, campsites, air landing strips, air navigation aids, fuel and supply storage sites, waste disposal sites, excavations and other works and places that were constructed or used by the permittee in the land-use operation, and
 - (iii) bridges, dams, ditches, railroads, roads, transmission lines, pipelines, survey lines, monuments, air landing strips, watercourses, traplines and cabins and all other features or works that were affected by the land-use operation; and
- (c) calculations of the area of the lands used in the land-use operation.

On receipt of a written request from a permittee for an extension of time for the filing of a final plan, the Board may extend the time for filing the final plan by not more than 60 days.

The Board shall reject any final plan that is not complete.

Within three weeks after receipt of written notice from the Board rejecting a plan, a permittee shall submit to the Board a final plan that is complete.

Notwithstanding the expiration or cancellation of a permit, the submission of a final plan or the giving of a notice of discontinuance, a permittee remains responsible for all obligations arising under the permit or under the Mackenzie Valley Land Use Regulations until such time as the Board issues a letter of clearance pursuant.

A final plan shall:

- (a) be drawn on a scale that clearly shows the lands that the applicant for a permit proposes to use or that the permittee has used;
- (b) show the scale to which the plan is drawn; and
- (c) show locations by geographic co-ordinates.

Within 30 days after the Board has approved the final plan, a permittee shall submit to the Board calculations of any applicable land-use fee payable, based on the actual area of land used in the land-use operation.

Where the calculated fee is less than the fee submitted with the application, the Board shall refund the difference to the permittee.

Where the calculated fee is greater than the fee submitted with the application, the permittee shall submit payment for the amount of the deficiency with the calculations.