

Review Comment Table

Board:	GLWB
Review Item:	Northwind Industries - Quarrying km 235 and 251 Dempster Highway #8 (G19Q009)
File(s):	G19Q009
Proponent:	Northwind Industries
Document(s):	Application Package (1438 KB) Draft Land Use Permit (795 KB)
Item For Review Distributed On:	
Reviewer Comments Due By:	Nov 15, 2019
Proponent Responses Due By:	Nov 19, 2019
Item Description:	<p>Northwind Industries Ltd. has submitted to the to the Gwich'in Land and Water Board an application for a Type A Land Use Permit for the purpose of blasting, extracting, crushing, stockpiling and hauling granular material from existing quarries located at km 235 and 251 Dempster Highway #8. The applicant requests a term of 5 years, with proposed activities beginning in November 2019.</p> <p>Reviewers are invited to submit comments and recommendations using the Online Review System (ORS) by the review comment deadline specified below. If reviewers seek clarification on the submission, they are encouraged to correspond directly with the proponent prior to submitting comments and recommendations.</p> <p>Please provide comments and recommendations on the:</p> <ul style="list-style-type: none"> • Application; • Spill Contingency Plan;

	<ul style="list-style-type: none"> • Preliminary Screening that will be conducted by the Board. (Your comments and recommendations on impacts and proposed mitigation measures will be used to help the Board make a preliminary screening decision. Please see below for additional information); and • Draft Land Use Permit (please clearly indicate which condition you are commenting on). <p>Please note that the Draft Permit has been developed using the MVLWB's current Standard Land Use Permit Conditions Template. The purpose of this draft Permit is to allow parties to comment on Board staff's suggested conditions. These draft materials are not intended to limit in any way the scope of parties' comments. The Board is not bound by the contents of the draft Permit and will make its decision at the close of the proceeding on the basis of all the evidence and arguments filed by all parties.</p>
General Reviewer Information:	The Board encourages reviewers to submit questions and/or recommendations through the Online Review System, no later than Friday November 15, 2019. Note that all documents that have been uploaded to this review are also available on our public registry. If you have questions or require assistance with the ORS, please contact Board staff identified below.
Contact Information:	Alec Sandra Macdonald 867-777-4954

Comment Summary

Bobs Welding & Heavy Equipment Repairs Ltd.: Bob Gully				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	General File	Comment (doc) Bob's Welding Ltd Recommendation		
GNWT - ENR - EAM: Central Email GNWT				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
22	General File	Comment (doc) ENR Letter with Comments and Recommendations Recommendation		

1	Topic 1: Industrial and Solid, Liquid or Sewage Waste Disposal	<p>Comment If the Proponents Waste Management Plan or methods of waste disposal indicate that project waste, or industrial waste, will be transported to community infrastructure for disposal, the Proponent should not assume they may deposit industrial wastes, generated outside of community boundaries, in Northwest Territories community Solid and Liquid Waste Disposal Facilities.</p> <p>Recommendation 1) Should the Proponent intend to deposit waste in an NWT community Solid and Liquid Waste Disposal Facility, ENR requests that the Proponent demonstrate in the Waste Management Plan, or to the Board, that the receiving communities' Solid and Liquid Waste Disposal Facility holds a Water Licence that authorizes the disposal of any industrial waste streams originating from outside municipal boundaries. The Proponent should also demonstrate to the Board that the community has been consulted, and has consented in writing, regarding the use of its infrastructure for disposal of the waste streams and quantities in question, and the disposal of such wastes will not contravene the Waters Act or the Environmental Protection Act and related Regulations and Guidelines.</p>		
2	Topic 2: Open Burning	<p>Comment The following recommendations apply to proponents who are using open burning as a disposal option.</p> <p>Recommendation 1) If open burning will be utilized during project activities, only those waste streams identified in the Municipal Solid Wastes Suitable for Open Burning document located on the GNWT ENR website may be open burned without the use of an approved incinerator. The document can be found at the following site. http://www.enr.gov.nt.ca/sites/enr/files/guidelines/solid_wastes_suitable_open_burning.pdf</p>		
3	Topic 3: Hazardous Waste Management	<p>Comment All Proponents that generate hazardous wastes must be registered as a generator of hazardous waste in the NWT. The Guideline for the General Management of Hazardous Waste in the NWT defines hazardous waste and outlines the roles and responsibilities of generators, carriers, and receivers of hazardous waste in the NWT. The ENR, Environment Division (ED) registers generators, carriers, receivers, and tracks the disposal of hazardous waste generated in the NWT to registered receiving facilities on hazardous waste movement documents (manifest). The definition of hazardous waste includes all waste materials that are 'dangerous goods' according to the Transportation of Dangerous Goods Regulations, and any additional waste of special concern that the ED has determined hazardous until proven otherwise, including but not limited to: a) incinerator waste and/or residuals (including bottom ash and fly ash); b) any liquid or solid wastes contaminated</p>		

		<p>with refined petroleum products; c) bilge wastes; d) vehicle or vessel servicing wastes e) drilling wastes; f) produced fluids (Glycol / Hydrocarbon / Inorganic Mixtures); g) tailings; and h) any hydrocarbon, lead, mercury or other forms of contaminated soils. The Guideline for the General Management of Hazardous Waste in the NWT and the Transportation of Dangerous Good Regulations may be found at the following sites: http://www.enr.gov.nt.ca/sites/enr/files/resources/128-hazardous_waste-interactive_web.pdf http://www.tc.gc.ca/eng/tdg/clear-menu-497.htm Recommendation 1) If the Proponent is using or generating hazardous waste, they must register as a generator of hazardous waste in the NWT and track the disposal of hazardous waste from the site activities to registered receivers on hazardous waste movement documents provided by ENR. Please contact the Environment Division, ENR to register or for more information contact Mr. Lee Ross, Hazardous Materials Management Specialist, Environment Division by email (Lee.Ross@gov.nt.ca) or by phone (867) 767-9236 extension 53187.</p>		
4	Topic 4: Fuel Storage and Spill Contingency Planning and Reporting	<p>Comment ENR acknowledges the proponent's Spill Contingency Plan. In addition, the Proponent should also follow best practices for fuel storage and spill containment during project activities which may include the following recommendations. Recommendation 1) To assist in spill contingency planning, information is provided in EPA Spill Contingency Planning and Reporting Regulations found here: https://www.justice.gov.nt.ca/en/files/legislation/environmental-protection/environmental-protection.r2.pdf If clarification or further information is needed please contact the Environment Division, ENR directly to aid in the development of the Plan</p>		
5	None	<p>Comment None Recommendation 2) In accordance with the Spill Contingency Planning and Reporting Regulations Section 10, all spills in accordance with Schedule B must be reported immediately to the 24-hour Spill Report Line (867) 920-8130.</p>		
6	None	<p>Comment None Recommendation 3) With respect to the Environmental Protection Act Section 5 (1b) all spills, regardless of amount, must be cleaned up, and contaminated materials disposed of at an approved facility, or in an approved manner. Additionally, as indicated in Section 5(1c) all reasonable efforts must be made to notify any parties affected or potentially affected by the spill.</p>		

7	None	<p>Comment None</p> <p>Recommendation 4) Fuel storage areas should be greater than 100m distance from the ordinary high water mark of a water body and not located in a drainage channel.</p>		
8	None	<p>Comment None</p> <p>Recommendation 5) All fuel or storage vessels containing hazardous substances left for extended periods of time (including overnight in vehicles), should be stationed in an area that contains sufficient secondary containment (i.e. Drip pans, lined bermed areas, double walled enviro-tanks etc.).</p>		
9	None	<p>Comment None</p> <p>Recommendation 6) It is recommended spill kits be provided. Personnel should be trained to ensure that in the event of a spill it is contained and remediated appropriately to industry-accepted best practices and regulatory approval. In case refuelling takes place near water, in water spill planning should be considered to prevent inadvertent releases.</p>		
10	None	<p>Comment None</p> <p>Recommendation 7) ENR recommends, for the operator's convenience and increased environmental protection, that all heavy equipment and refuelling vehicles carry portable spill kits that include items such as absorbent pads, containment booms, and spill pool catchment receptacles. Readily available and fully stocked spill kits can effectively mitigate potential spills.</p>		
11	Topic 5: Wildlife: NWT Listed and Pre-listed Species at Risk	<p>Comment Sections 76 and 77 of the Species at Risk (NWT) Act require the Minister of Environment and Natural Resources to make a submission to the body responsible for assessing the potential impacts of a proposed development, or for considering a Land Use Permit or Water Licence application, respecting the potential impacts of the proposed development, Permit or Licence application on a NWT-listed or pre-listed species or its habitat. NWT-listed species are those that are on the NWT List of Species at Risk. Pre-listed species are those that have been assessed by the NWT Species at Risk Committee (SARC) but have not yet been added to the NWT List of Species at Risk. The Proponent should be aware that NWT-listed or pre-listed species at risk and their habitat may also be subject to protection under existing sections of the NWT Wildlife Act. As a best practice, ENR encourages the Proponent to consider potential impacts, mitigation measures and monitoring requirements for species at risk listed under the federal Species at Risk Act, as well as those designated as at risk by the Committee on the Status of Endangered Wildlife</p>		

		<p>in Canada (COSEWIC) that may occur in the project area, and the prohibitions that may apply to these species under federal legislation. The project area overlaps with the ranges of the following NWT-listed and/or pre-listed species: . Boreal Caribou - Threatened . Grizzly Bear - Special Concern . Barren-ground Caribou - Threatened . Polar Bear - Special Concern</p> <p>Recommendation 1) Although the project overlaps with the range(s) of the species listed above, ENR is of the opinion that the scope, areal extent, scale and/or timing of the proposed project are such that the likelihood of impacts to NWT-listed or pre-listed species at risk is minimal if appropriate mitigation measures as outlined in this letter to the Board and the proponent are employed as may be required.</p>		
12	Topic 6: Cumulative Effects Tracking	<p>Comment Keeping track of the disturbance footprint of development activities is an important component of tracking and informing the management of cumulative effects on wildlife and wildlife habitat. The consistent collection and posting of spatial data by Land and Water Boards from project proponents would assist greatly in the mapping of land and water disturbances in the territory. This is a key piece in the understanding of cumulative effects. ENR-NWT Cumulative Impact Monitoring Program currently populates a human disturbance data layer, available as part of the 'Inventory of Landscape Change', that is derived from satellite imagery and interpretation of public registry documents. It is a cumbersome process that could be improved by submission to the public registry of standardized spatial data from all permit holders that create a physical footprint on the land.</p> <p>Recommendation 1) The Proponent should submit the bounding coordinates or geospatial data for the proposed project footprint and for the completed project footprint to the Land and Water Board for placement on the public registry. The Mackenzie Valley Land and Water Board's Standards for Geographic Information Systems (GIS) Submissions should be followed when submitting spatial data.</p>		
13	Topic 7: Wildlife Abodes	<p>Comment Subject to sub-section 51(2) of the Wildlife Act, it is illegal to break into, destroy, or damage a den, beaver dam or lodge, muskrat push-up or hibernaculum unless you have an Aboriginal or treaty right or a Permit to do so. Protection of dens, beaver lodges, muskrat push-ups, and hibernacula is essential to ensuring reproductive success and survival of both adults and young.</p> <p>Recommendation 1) The Proponent should conduct pre-activity surveys within 800m of</p>		

		the project footprint to identify active bear dens if project activities will occur between September 30 and March 30. Surveys should be conducted in the fall to detect freshly dug dens.		
14	None	Comment None Recommendation 2) If an active bear den is detected, or suspected, the Proponent should implement and maintain an 800 m exclusion zone until the bear emerges in spring.		
15	None	Comment None Recommendation 3) If a bear den and exclusion zone would result in the halt of part or the entire program, the Proponent should contact ENR to discuss alternative mitigation options. The location of active bear dens should be kept confidential between the developer and ENR until after emergence in the spring.		
16	None	Comment None Recommendation 4) It is recommended that, if encountered, beaver lodges, muskrat push-ups, and hibernacula are not disturbed or damaged.		
17	Topic 8: Wildlife Attractants and Waste Management	Comment Subject to sub-section 66(1) of the Wildlife Act no person shall store food, waste, or other substances in a manner that may attract big game or other prescribed wildlife and put people, domestic animals, or wildlife in danger. Subject to sub-section 65(1) of the Wildlife Act, it is illegal to intentionally feed big game, furbearers or other prescribed wildlife. Schedule A - Part 2 of the Wildlife General Regulations sets out the species prescribed as fur-bearers. Recommendation 1) The Proponent should utilize food and garbage handling and storage procedures that will minimize the attraction of wildlife.		
18	None	Comment None Recommendation 2) The Proponent should store all food, waste, washed recyclables and debris that may attract wildlife within sealed animal proof containers until final disposal.		
19	None	Comment None Recommendation 3) The Proponent should ensure that sealed animal proof containers are cleaned once emptied to minimize the attraction of wildlife.		
20	None	Comment None Recommendation 4) The Proponent should ensure that all grey water (dishwater, showers,		

		laundry, etc.) and black water (sewage) are treated and disposed of in a manner that will minimize the attraction of wildlife.		
21	None	Comment None Recommendation 5) The Proponent should remove all waste petroleum products including used oil filters, rags, scrap metal, discarded machinery, parts, drums, barrels, or plastics to an approved waste disposal facility.		
GNWT - Lands - Beaufort Delta Region: Donald Arey				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	General File	Comment (doc) GNWT Lands Recommended T& C Recommendation		
GNWT - PWNHC (Prince of Wales Northern Heritage Centre (w/in ECE)): Naomi Smethurst				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Protection of Historical, Archaeological, and Burial Sites	Comment The location of proposed quarry activities is unclear. Please clarify if activities will be within the existing disturbed quarry footprints or if activities will expand into previously undisturbed terrain. Recommendation Provided all activities will take place within the existing disturbed footprint, no further archaeological studies are required. However, an Archaeological Impact Assessment is required if quarries are to be expanded into previously undisturbed terrain.		
GTC Department of Cultural Heritage : Sharon Snowshoe				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	General File	Comment (doc) GTC Department of Cultural Heritage Comments Recommendation		

Gwich'in Renewable Resources Board: Staff Gwichin Renewable Resource Board				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	GRRB comments	Comment No comments or concerns. Recommendation Approve application and continue work.		

Bobs Welding & Heavy Equipment Repairs Ltd.
Box 2644, Inuvik, NT, X0E 0T0
Ph: (867) 777-4174

November 18, 2019

*Gwich'in Land and Water Board
105 Veterans Way, P.O. Box 2018
Inuvik, NT. X0E 0T0
Telephone: (867) 777-4954
Fax: (867) 777-2304*

Attn: AlecSandra Macdonald, Regulatory Specialist, (867) 777-4954, ext. 3

Re: Expressing concerns regarding KM 251 on highway #8 (Dempster)

Good day all, we are writing this letter to voice our concerns about KM 251 on Dempster highway #8. At this current moment there is another contractor wanting access to this pit stated above and we do have a couple concerns regarding safety and overcrowding of the pit.

We strongly feel as though if another operator were to gain access to pit 251, we would be stepping on each other toes; there is a very limited area to work in safely. The safety concern is that we have 1 crusher located there and equipment that are in operation year round. There would be absolutely no room any other contractors, as we operate day to day in pit 251 year round (winter, spring, summer and fall) doing drilling, blasting, crushing and hauling. The safety concerns regarding drilling and blasting would become even larger as other parties would be working in pit 251.

The over crowding aspect of our concern is that there are currently 3 land use permit holders for KM 241 and if another was to gain access that would be 4 contractors in this pit at the same exact time; there is very limited space.

Bob's Welding has been working in pit 251 year round, since 1990 supplying aggregates to the entire Beaufort Delta Region; we have a large customer base and even contracts to supply aggregates with the GNWT.

Bobs Welding cannot shut down at any time to make room for another operator/land use permit holder to go in for any period of time; if this is to happen it will effect our daily operation in which we supply all types of materials, many types of rocks for our entire customer base. At no time has Bob's Welding ever packed up and vacated the pit as we operate day to day in pit 251. We always have inventory stock piles on hand ranging from runway sand to shore line erosion rock; as some projects do come up in winter months or as emergency aggregate needs arise; we will not be able to prepare for these emergencies if we are to shut down at any periods of times; we have been commencing this work in this field since 1990 and we are aware of all aggregate emergencies that arise within all the seasons, which we do prepare for.

In the past we have brought these 2 safety concerns forward to Government Lands Office regarding overcrowding in which our voiced concerns had no effect.

On highway 8, KM 251 there is a pit 19 km away; KM 235 this pit has always been open, there is more space there for contractors to gain access to. This would be the most ideal location for new permit holders to commence their work safely.

Thank you for your time regarding these concerns,



Lyle Gully

Vice President



AlecSandra Macdonald
Regulatory Specialist
Gwich'in Land and Water Board
P.O. Box 2018 Inuvik, NT X0E 0T0
Via email: amacdonald@glwb.com

November 8, 2019

Dear AlecSandra,

Re: Quarrying at KM235 and 251

We have reviewed the above application, and have the following concerns at this time.

KM 235: The DCH has noted that the development is within close proximity to four known archaeological sites and there is a high likelihood of other undiscovered sites nearby. It is not clear if there will be new surface-altering impacts relating to this application. If they will open any new areas for development, and previously undisturbed portions of the gravel deposit will be impacted, an archaeological assessment will be required.

The DCH has also noted that the exit of the gravel pit is located very close to the turn-off for the park facilities at Campbell Lake. Trucks should be instructed to maintain a low driving speed around the turn off into the recreational area. This is to protect tourists and recreational/subsistence harvesters travelling to Gwich'in Park facilities. The DCH also requests that adverse impacts due to an increase in noise and dust be properly mitigated if and when noise or dust may impact the use of the recreational area.

KM 251: We have no concerns at this time.



As with any application, if archaeological or heritage materials are encountered during the development within the Gwich'in Settlement Area, all work must cease immediately as required by law, and the DCH and the Prince of Wales Northern Heritage Centre in Yellowknife must then be contacted.

Sincerely,

Sharon Snowshoe
Director, Department of Cultural Heritage
P.O. Box 30
Fort McPherson, NT X0E 0J0
P: (867)952-2593
E: ssnowshoe@gwichin.nt.ca
www.gwichin.ca



November 15, 2019

AlecSandra MacDonald
Land and Water Technician
Gwich'in Land and Water Board
Box 2018
Inuvik, NT
X0E 0T0

Dear Ms. MacDonald,

**Re: Northwind Industries
Land Use Permit Application – G19Q009
Quarry and Associated Activities – km 235 and 251 – Highway #8
Request for Review and Comments**

The Department of Environment and Natural Resources (ENR), Government of the Northwest Territories has reviewed the application at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, the *Species at Risk (NWT) Act*, the *Waters Act* and the *Wildlife Act* and provides the following comments and recommendations for the consideration of the Board.

Topic 1: Industrial and Solid, Liquid or Sewage Waste Disposal

Comment(s):

If the Proponents Waste Management Plan or methods of waste disposal indicate that project waste, or industrial waste, will be transported to community infrastructure for disposal, the Proponent should not assume they may deposit industrial wastes, generated outside of community boundaries, in Northwest Territories community Solid and Liquid Waste Disposal Facilities.

Recommendation(s):

- 1) Should the Proponent intend to deposit waste in an NWT community Solid and Liquid Waste Disposal Facility, ENR requests that the Proponent demonstrate in a Waste Management Plan, and to the Board, that the receiving communities'

Solid and Liquid Waste Disposal Facility holds a Water Licence that authorizes the disposal of any industrial waste streams originating from outside municipal boundaries. The Proponent should also demonstrate to the Board that the community has been consulted, and has consented in writing, regarding the use of its infrastructure for disposal of the waste streams and quantities in question, and the disposal of such wastes will not contravene the Waters Act or the *Environmental Protection Act* and related Regulations and Guidelines.

Topic 2: Open Burning

Comment(s):

The following recommendations apply to proponents who are using open burning as a disposal option.

Recommendation(s):

- 1) If open burning will be utilized during project activities, only those waste streams identified in the *Municipal Solid Wastes Suitable for Open Burning* document located on the GNWT ENR website may be open burned without the use of an approved incinerator. The document can be found at the following site.

http://www.enr.gov.nt.ca/sites/enr/files/guidelines/solid_wastes_suitable_open_burning.pdf

Topic 3: Hazardous Waste Management

Comment(s):

All Proponents that generate hazardous wastes must be registered as a generator of hazardous waste in the NWT.

The Guideline for the General Management of Hazardous Waste in the NWT defines hazardous waste and outlines the roles and responsibilities of generators, carriers, and receivers of hazardous waste in the NWT. The ENR, Environment Division (ED) registers generators, carriers, receivers, and tracks the disposal of hazardous waste generated in the NWT to registered receiving facilities on hazardous waste movement documents (manifest). The definition of hazardous waste includes all waste materials that are 'dangerous goods' according to the Transportation of Dangerous Goods Regulations, and any additional waste of special concern that the ED has determined hazardous until proven otherwise, including but not limited to:

- a) incinerator waste and/or residuals (including bottom ash and fly ash);
- b) any liquid or solid wastes contaminated with refined petroleum products;
- c) bilge wastes;

- d) vehicle or vessel servicing wastes
- e) drilling wastes;
- f) produced fluids (Glycol / Hydrocarbon / Inorganic Mixtures);
- g) tailings; and
- h) any hydrocarbon, lead, mercury or other forms of contaminated soils.

The Guideline for the General Management of Hazardous Waste in the NWT and the Transportation of Dangerous Good Regulations may be found at the following sites:

http://www.enr.gov.nt.ca/sites/enr/files/resources/128-hazardous_waste-interactive_web.pdf

<http://www.tc.gc.ca/eng/tdg/clear-menu-497.htm>

Recommendation(s):

- 1) If the Proponent is using or generating hazardous waste, they must register as a generator of hazardous waste in the NWT and track the disposal of hazardous waste from the site activities to registered receivers on hazardous waste movement documents provided by ENR. Please contact the Environment Division, ENR to register or for more information contact Mr. Lee Ross, Hazardous Materials Management Specialist, Environment Division by email (Lee.Ross@gov.nt.ca) or by phone (867) 767-9236 extension 53187.

Topic 4: Fuel Storage and Spill Contingency Planning and Reporting

Comment(s):

ENR acknowledges the proponent's Spill Contingency Plan.

In addition, the Proponent should also follow best practices for fuel storage and spill containment during project activities which may include the following recommendations.

Recommendation(s):

- 1) To assist in spill contingency planning, information is provided in EPA *Spill Contingency Planning and Reporting Regulations* found here:

<https://www.justice.gov.nt.ca/en/files/legislation/environmental-protection/environmental-protection.r2.pdf>

If clarification or further information is needed please contact the Environment Division, ENR directly to aid in the development of the Plan

- 2) In accordance with the *Spill Contingency Planning and Reporting Regulations Section 10*, all spills in accordance with Schedule B must be reported immediately to the 24-hour Spill Report Line (867) 920-8130.
- 3) With respect to the *Environmental Protection Act Section 5 (1b)* all spills, regardless of amount, must be cleaned up, and contaminated materials disposed of at an approved facility, or in an approved manner. Additionally, as indicated in *Section 5(1c)* all reasonable efforts must be made to notify any parties affected or potentially affected by the spill.
- 4) Fuel storage areas should be greater than 100m distance from the ordinary high water mark of a water body and not located in a drainage channel.
- 5) All fuel or storage vessels containing hazardous substances left for extended periods of time (including overnight in vehicles), should be stationed in an area that contains sufficient secondary containment (i.e. Drip pans, lined bermed areas, double walled enviro-tanks etc.).
- 6) It is recommended spill kits be provided. Personnel should be trained to ensure that in the event of a spill it is contained and remediated appropriately to industry-accepted best practices and regulatory approval. In case refuelling takes place near water, in water spill planning should be considered to prevent inadvertent releases.
- 7) ENR recommends, for the operator's convenience and increased environmental protection, that all heavy equipment and refuelling vehicles carry portable spill kits that include items such as absorbent pads, containment booms, and spill pool catchment receptacles. Readily available and fully stocked spill kits can effectively mitigate potential spills.

Topic 5: Wildlife: NWT Listed and Pre-listed Species at Risk

Comment(s):

Sections 76 and 77 of the *Species at Risk (NWT) Act* require the Minister of Environment and Natural Resources to make a submission to the body responsible for assessing the potential impacts of a proposed development, or for considering a Land Use Permit or Water Licence application, respecting the potential impacts of the proposed development, Permit or Licence application on a NWT-listed or pre-listed species or its habitat. NWT-listed species are those that are on the NWT List of Species at Risk. Pre-listed species are those that have been assessed by the NWT Species at Risk Committee (SARC) but have not yet been added to the NWT List of Species at Risk.

The Proponent should be aware that NWT-listed or pre-listed species at risk and their habitat may also be subject to protection under existing sections of the NWT *Wildlife Act*.

As a best practice, ENR encourages the Proponent to consider potential impacts, mitigation measures and monitoring requirements for species at risk listed under the federal *Species at Risk Act*, as well as those designated as at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) that may occur in the project area, and the prohibitions that may apply to these species under federal legislation.

The project area overlaps with the ranges of the following NWT-listed and/or pre-listed species:

- [Boreal Caribou](#) - Threatened
- [Grizzly Bear](#) - Special Concern
- [Barren-ground Caribou](#) – Threatened
- [Polar Bear](#) – Special Concern

Recommendation(s):

- 1) Although the project overlaps with the range(s) of the species listed above, ENR is of the opinion that the scope, areal extent, scale and/or timing of the proposed project are such that the likelihood of impacts to NWT-listed or pre-listed species at risk is minimal if appropriate mitigation measures as outlined in this letter to the Board and the proponent are employed as may be required.

Topic 6: Cumulative Effects Tracking

Comment(s):

Keeping track of the disturbance footprint of development activities is an important component of tracking and informing the management of cumulative effects on wildlife and wildlife habitat.

The consistent collection and posting of spatial data by Land and Water Boards from project proponents would assist greatly in the mapping of land and water disturbances in the territory. This is a key piece in the understanding of cumulative effects. ENR-NWT Cumulative Impact Monitoring Program currently populates a human disturbance data layer, available as part of the 'Inventory of Landscape Change', that is derived from satellite imagery and interpretation of public registry documents. It is a cumbersome process that could be improved by submission to the public registry of standardized spatial data from all permit holders that create a physical footprint on the land.

Recommendation(s):

- 1) The Proponent should submit the bounding coordinates or geospatial data for the proposed project footprint and for the completed project footprint to the Land and Water Board for placement on the public registry. The Mackenzie Valley Land and Water Board's *"Standards for Geographic Information Systems (GIS) Submissions"* should be followed when submitting spatial data.

Topic 7: Wildlife Abodes**Comment(s):**

Subject to sub-section 51(2) of the Wildlife Act, it is illegal to break into, destroy, or damage a den, beaver dam or lodge, muskrat push-up or hibernaculum unless you have an Aboriginal or treaty right or a Permit to do so.

Protection of dens, beaver lodges, muskrat push-ups, and hibernacula is essential to ensuring reproductive success and survival of both adults and young.

Recommendation(s):

- 1) The Proponent should conduct pre-activity surveys within 800m of the project footprint to identify active bear dens if project activities will occur between September 30 and March 30. Surveys should be conducted in the fall to detect freshly dug dens.
- 2) If an active bear den is detected, or suspected, the Proponent should implement and maintain an 800 m exclusion zone until the bear emerges in spring.
- 3) If a bear den and exclusion zone would result in the halt of part or the entire program, the Proponent should contact ENR to discuss alternative mitigation options. The location of active bear dens should be kept confidential between the developer and ENR until after emergence in the spring.
- 4) It is recommended that, if encountered, beaver lodges, muskrat push-ups, and hibernacula are not disturbed or damaged.

Topic 8: Wildlife Attractants and Waste Management**Comment(s):**

Subject to sub-section 66(1) of the *Wildlife Act* no person shall store food, waste, or other substances in a manner that may attract big game or other prescribed wildlife and put people, domestic animals, or wildlife in danger.

Subject to sub-section 65(1) of the *Wildlife Act*, it is illegal to intentionally feed big game, furbearers or other prescribed wildlife. Schedule A – Part 2 of the *Wildlife General Regulations* sets out the species prescribed as fur-bearers.

Recommendation(s):

- 1) The Proponent should utilize food and garbage handling and storage procedures that will minimize the attraction of wildlife.
- 2) The Proponent should store all food, waste, washed recyclables and debris that may attract wildlife within sealed animal proof containers until final disposal.
- 3) The Proponent should ensure that sealed animal proof containers are cleaned once emptied to minimize the attraction of wildlife.
- 4) The Proponent should ensure that all grey water (dishwater, showers, laundry, etc.) and black water (sewage) are treated and disposed of in a manner that will minimize the attraction of wildlife.
- 5) The Proponent should remove all waste petroleum products including used oil filters, rags, scrap metal, discarded machinery, parts, drums, barrels, or plastics to an approved waste disposal facility.

Comments and Recommendations Directed to the Proponent

The following comments are directed to the applicant of the Land Use Permit and are provided based on ENR's mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, the *Species at Risk (NWT) Act*, the *Waters Act* and the *Wildlife Act*. The following comments and recommendations are for the information, consideration, and appropriate action of the Proponent and as they are applicable to project activities.

Legislative and Regulatory Requirements

Topic 1: Forest Management

Recommendation(s):

1. In order to comply with the *Forest Protection Act* (Sections 10 and 19(1)), the Proponent should adhere to the *Forest Fire Prevention and Suppression Guidelines*. The intent of the Guidelines is threefold. First, industrial operations must be conducted so that they do not contribute to the fire load. Second, industrial operations must be able to control and extinguish any fires that occur as a result of their operations. Finally, industrial operations must be able to

respond to wildfires that may affect human life and other property as a result of their operations. The guidelines may be accessed at the following website:

http://www.enr.gov.nt.ca/sites/enr/files/industrial_guidelines_forest_fire_prevention_suppression.pdf

2. The *Forest Management Act* and Regulations prohibits anyone from cutting, using or transporting timber, or damaging standing timber unless:
 - Authorized with a Timber Permit;
 - Authorized by license; or
 - Exempted from holding a Permit or license.

The Proponent is requested to contact the local/regional ENR office for further information on obtaining a Forest Management Authorization, if required.

3. If the Proponent plans to burn brush or other materials during the official fire season (May 01 – September 30), they will require a Permit to Burn from ENR, as per the *Forest Protection Act* (Section 10(1) and 21).
4. The Proponent should be aware of Part 1 Clause 18 of the *Exemption List Regulations* under the *Mackenzie Valley Resource Management Act* in which a burn authorized under a Permit to Burn is exempt from Preliminary Screening if it is not greater than an area of 25 m².
5. If the site brush and tree cover is not merchantable then it should be piled up accordingly (and not mixed with soil) so that it can be burned or spread out at a later date. If merchantable wood is involved, either merchantable firewood or saw timber, it should be cleanly set to one side of the operation and made available for recovery. The Proponent should contact the local ENR office to determine what forest management authorization will be required, if any.

Topic 2: Wildlife Abodes

Comment(s):

Subject to sub-section 51(2) of the *Wildlife Act*, it is illegal to break into, destroy or damage a den, beaver dam or lodge, muskrat push-up or hibernaculum unless you have an Aboriginal or treaty right or a Permit to do so.

Protection of dens, beaver lodges, muskrat push-ups, and hibernacula is essential to ensuring reproductive success and survival of both adults and young.

Recommendation(s):

- 1) Contact ENR prior to start-up of project activities to determine if there are any known dens, push-ups, lodges, beaver dams or hibernacula within the project area.
- 2) Prior to start-up of project activities, conduct surveys of lakes or other water bodies proposed to be used for water withdrawal or winter access roads to determine the presence of muskrat push-ups, beaver lodges or beaver dams. If one or more of these features is found contact ENR to discuss mitigation options.
- 3) Further guidance on different setback distances and timing windows for wildlife abodes are provided in Table 6 of the Northern Land Use Guidelines: Northwest Territories Seismic Operations Vol.9 (a) at:

http://www.lands.gov.nt.ca/sites/lands/files/resources/nlug_seismic_2015_english_-_16_sept_2015.pdf

Proponents should also check whether there are setback distances and timing restrictions for wildlife abodes within the regional land use plan for their project area.

Topic 3: Advice for NWT Listed and Pre-listed Species at Risk**Comment(s):**

Sections 76 and 77 of the *Species at Risk (NWT) Act* requires the Minister of Environment and Natural Resources to make a submission to the body responsible for assessing the potential impacts of a proposed development, or for considering a Land Use Permit or Water Licence application, respecting the potential impacts of the proposed development, Permit or Licence application on a NWT-listed or pre-listed species or its habitat. NWT-listed species are those that are on the NWT List of Species at Risk. Pre-listed species are those that have been assessed by the NWT Species at Risk Committee (SARC) but have not yet been added to the NWT List of Species at Risk.

The Proponent should be aware that NWT-listed or pre-listed species at risk and their habitat may also be subject to protection under existing sections of the *NWT Wildlife Act*.

As a best practice, ENR encourages the Proponent to consider potential impacts, mitigation measures and monitoring requirements for species at risk listed under the federal *Species at Risk Act*, as well as those designated as at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) that may

occur in the project area, and the prohibitions that may apply to these species under federal legislation.

The project area overlaps with the ranges of the following NWT-listed and/or pre-listed species:

- [Boreal Caribou](#) - Threatened
- [Grizzly Bear](#) - Special Concern
- [Barren-ground Caribou](#) - Threatened
- [Polar Bear](#) - Special Concern

Recommendation(s):

1) For information on NWT species at risk in the project area please consult:

- <http://www.nwtspeciesatrisk.ca/SpeciesAtRisk>
- <http://www.nwtspeciesatrisk.ca/ToolsForDevelopers>
- [Species at Risk in the NWT - 2016 Edition](#)

The Proponent should be aware of the prohibitions that may apply to the species that occur in your area. Check the *Species at Risk (NWT) Act* regulations webpage (<http://www.nwtspeciesatrisk.ca/ToolsForDevelopers>) to see if there are any applicable regulations or agreements with land owners that must be followed for NWT-listed or pre-listed species at risk.

- 2) For information and legislative requirements related to federally-listed species at risk, consult the Species at Risk Public Registry (www.sararegistry.gc.ca) or contact Environment and Climate Change Canada or the Department of Fisheries and Oceans.
- 3) Ensure that employees and contractors are aware of the species at risk that might occur in the project area. This includes species that are pre-listed or listed under the *Species at Risk (NWT) Act*, species listed under the federal *Species at Risk Act*, and species designated as at risk by COSEWIC.
- 4) If species at risk are encountered during project undertakings, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence.
- 5) Monitoring should be undertaken by the Proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, monitoring should include recording the locations and dates of any observations of species at risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the

Proponent to avoid contact with or disturbance to the species, its habitat, and/or its residence.

- 6) Submit sightings of species at risk and monitoring information to ENR's Wildlife Management Information System (WMIS) and to other appropriate regulators and organizations with management responsibility for the species as may be necessary at:

<http://www.enr.gov.nt.ca/programs/wildlife-research/wildlife-management-information-services>

Further information on the WMIS can be found at:

<http://www.enr.gov.nt.ca/programs/wildlife-research/wildlife-management-information-services>

Topic 4: Cumulative Effects Tracking

Comment(s):

Keeping track of the disturbance footprint of development activities is an important component of tracking and informing the management of cumulative effects on wildlife and wildlife habitat.

The consistent collection and posting of spatial data by Land and Water Boards from project proponents would assist greatly in the mapping of land and water disturbances in the territory. This is a key piece in the understanding of cumulative effects. ENR-NWT Cumulative Impact Monitoring Program currently populates a human disturbance data layer, available as part of the 'Inventory of Landscape Change', that is derived from satellite imagery and interpretation of public registry documents. It is a cumbersome process that could be improved by submission to the public registry of standardized spatial data from all permit holders that create a physical footprint on the land.

Recommendation(s):

- 1) The Proponent should submit the bounding coordinates, or geospatial data for the proposed project footprint and for the completed project footprint to the Land and Water Board for placement on the public registry. The MVLWB's "Standards for Geographic Information Systems (GIS) Submissions" should be followed when submitting spatial data.

Topic 5: Nesting Birds

Comment(s):

- Conducting activities involving vegetation clearing, ground disturbance or demolition of buildings and other structures during the nesting season increases the risk of contravening paragraph 51(1)(a) of the *Wildlife Act* which prohibits destroying, disturbing, or taking the eggs of a bird or a nest when it is occupied by a bird or its eggs, or destroying, disturbing, or taking the nest of a prescribed bird at any time.
- Protection of nests is essential to ensuring reproductive success and survival of both adults and young.
- The Canadian Wildlife Service of Environment and Climate Change Canada (ECCC) is the responsible management authority for migratory birds protected under the Migratory Birds Convention Act, 1994.

<https://ec.gc.ca/nature/default.asp?lang=En&n=496E2702-1>

- GNWT is responsible for the management of non-migratory birds including raptors.
- Critical breeding periods for NWT raptors can start as early as the 1st week of April and last up until 3rd week of September, depending on the species and location.

Recommendation(s):

- 1) Follow ECCC's Avoidance Guidelines related to incidental take of migratory birds in Canada available at:

<http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=AB36A082-1>)

- 2) Consult ECCC's *General Nesting Periods of Migratory Birds in Canada* for current information on general nesting periods of federally protected migratory birds that occur within the NWT. Available at:

<http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=4F39A78F-1>

- 3) Contact ENR, Wildlife Division for information on critical breeding periods for raptors and/or known raptor nest sites in the project area.
- 4) Conduct vegetation clearing and any new ground disturbance outside of the nesting season for birds in the project area.

- 5) If active nests are encountered during project activities implement protective buffer zones described in the regional land use plan, Table 6 of the Northern Land Use Guidelines – Seismic) or ECCC’s Recommended *Buffer Zones and Setback Distance* available at:

<http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=8D910CAC-1# 03 1 1>

Topic 6: Wildlife Disturbance and Harassment

Comment(s):

Unless authorized by a Licence or Permit, paragraphs 52(a) and (b) of the *Wildlife Act* prohibit engaging in an activity that is likely to result in significant disturbance to big game or other prescribed wildlife, or to unnecessarily chase, fatigue, disturb, torment or otherwise harass game or other prescribed wildlife.

Schedule A – Part 1 of the *Wildlife General Regulations*, sets out the species prescribed as big game, and Schedule B sets out prescribed wildlife for the purpose of paragraphs 52(a) and (b) of the *Wildlife Act*.

Disturbance to wildlife from sources such as noise, light, vibrations, and human presence can result in energetic stress, avoidance of key habitat, loss of reproductive fitness, injury or mortality of wildlife. Activities that may cause sensory disturbance to wildlife include vehicle traffic, stationary machinery, noise from blasting, excavation, crushing, seismic testing, vegetation clearing, and lighting or flaring.

Recommendation(s):

- 1) The Proponent should be aware that no wildlife should be disturbed, chased, or harassed by human beings on foot, in a motorized vehicle, or by aircraft. Unless authorized by a Licence or Permit, paragraphs 52(a) and (b) of the *Wildlife Act* prohibit engaging in an activity that is likely to result in significant disturbance to big game or other prescribed wildlife, or to unnecessarily chase, fatigue, disturb, torment or otherwise harass game or other prescribed wildlife. However, subject to section 55 of the *Wildlife Act* a person may chase wildlife away from a camp or work site if doing so is necessary to prevent injury or death to a person or damage to property.
- 2) Consult the setback distances, flight altitude guidelines and timing windows for wildlife provided in Tables 6 and 7 of the Northern Land Use Guidelines: Northwest Territories Seismic Operations Vol.9 (a) as they are applicable to variety of land use activities:

- 3) Consult the approved Land Use Plan, if applicable, that applies to the project area for further guidance on setback distances and timing windows to minimize disturbance to wildlife.
- 4) Wildlife shall be given the right of way at all times.
- 5) Suspend activities temporarily if one or more individuals of a big game species are spotted within five hundred (500) metres of the work site.

Topic 7: Reporting Wildlife Sighting

Comment(s):

Proponents are encouraged to record wildlife sightings and to submit these records to ENR's WMIS. Wildlife sightings data provides useful information for assessing changes in species distribution and the timing and location of different life history events such as migration, denning, nesting, calving, etc.

Recommendation(s):

- 1) Submit information about wildlife sightings (species, date, time, location, number of individuals, sex, behaviour, etc.) to WMIS at WMISTeam@gov.nt.ca. For further information on the WMIS consult:

<http://www.enr.gov.nt.ca/programs/wildlife-research/wildlife-management-information-services>

- 2) Contact the regional ENR office to obtain blank wildlife sightings forms.

Topic 8: Reporting Wildlife Defence/Property Kills and Wildlife Incidents

Comment(s):

Subject to paragraph 57(a) of the *Wildlife Act*, any big game or other prescribed wildlife that is killed to prevent injury or death to a person or damage to property must be reported to ENR as soon as is practicable. Section 7 of the *Wildlife General Regulations* describes what information must be included in the report.

Subject to section 58 of the *Wildlife Act* and sub-section 8(1) of the *Wildlife General Regulations*, any person who accidentally kills or seriously wounds big game or other prescribed wildlife with a motorized vehicle on a highway must report the event to an officer within 24 hours after the incident.

Recommendation(s):

- 1) Report all sightings of bears in and around the project location to your local ENR office. Any defence of life and property kills must be reported to the appropriate ENR office immediately. Please contact the following Regional Office as required:
 - Inuvik Region Wildlife Emergency Line at (867) 678-0289
- 2) Ensure all field personnel have completed a bear safety training course to decrease the risk of attracting bears to work sites and threats to human safety, learn how to respond to bear encounters, and decrease the risk of wildlife mortality resulting from kills in defence of life and property.
- 3) Consult the “Safety in Grizzly Bear and Black Bear Country” brochure, available at:
http://www.enr.gov.nt.ca/sites/enr/files/resources/safety_in_grizzly_and_black_bear_country_english.pdf
- 4) Report to an ENR officer as soon as is practicable any wildlife that is killed to prevent injury or death to a person or damage to property.
- 5) Report to an ENR officer any big game or other prescribed wildlife that is killed or seriously wounded by a motorized vehicle on a highway within 24 hours after the incident.
- 6) Reports must include at minimum the name of the person who killed or injured the wildlife, an explanation of the incident, the time, date and location of the incident, the species or quantity involved, and any other information requested by the wildlife officer.
- 7) Contact the regional ENR office to obtain blank wildlife incident forms.

Topic 9: Wildlife Attractants and Waste Management

Comment(s):

Subject to sub-section 66(1) of the *Wildlife Act* no person shall store food, waste, or other substances in a manner that may attract big game or other prescribed wildlife and put people, domestic animals or wildlife in danger.

Subject to sub-section 65(1) of the *Wildlife Act*, it is illegal to intentionally feed big game, furbearers or other prescribed wildlife. Schedule A – Part 2 of the *Wildlife General Regulations* sets out the species prescribed as fur-bearers.

Recommendation(s):

- 1) Waste being stored on site prior to being transported to a municipal landfill site, or disposed by other methods, must be stored in a manner that minimizes the attraction of wildlife, as it is a violation of *Section 66(1) of the Wildlife Act*. An animal proof, sealed container must be used for storing waste onsite to minimize wildlife being attracted to odours. For reference please refer to the following guidance document “Safety in Grizzly and Black Bear Country”

http://www.enr.gov.nt.ca/sites/enr/files/resources/safety_in_grizzly_and_black_bear_country_english.pdf

- 2) Project personnel should not intentionally feed wildlife or purposefully encourage wildlife to habituate to human presence.

Topic 10: Spill Contingency Planning

Recommendation(s):

- 1) In accordance with the *Spill Contingency Planning and Reporting Regulations Section 10*, all spills in accordance with Schedule B must be reported immediately to the 24-hour Spill Report Line (867) 920-8130.
- 2) With respect to the *Environmental Protection Act Section 5 (1b)* all spills regardless of amount must be cleaned up, and contaminated materials disposed of at an approved facility, and as per *Section 5(1c)* all reasonable efforts must be made to notify any parties affected or potentially affected by the spill.
- 3) ENR recommends, for increased environmental protection, that all heavy equipment and refuelling vehicles carry portable spill kits that include items such as absorbent pads, containment booms and spill pool catchment receptacles. Readily available and fully stocked spill kits can effectively mitigate potential spills.

ENR reminds the Proponent that references to applicable statutes and regulations are to be considered as advice only, and should not be construed as permission to contravene any other applicable statutes and regulations not mentioned in this letter.

Comments and recommendations were provided by ENR technical experts in the Environmental Protection and Waste Management Division, the Wildlife Management Division and the Inuvik Region and were coordinated and collated by the Environmental Assessment and Monitoring Section, Environmental Stewardship and Climate Change Division.

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at (867) 767-9233 Ext: 53096 or email patrick.clancy@gov.nt.ca.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Clancy', with a stylized, cursive script.

Patrick Clancy
Environmental Regulatory Analyst
Environmental Assessment and Monitoring Section
Environmental Stewardship and Climate Change Division
Department of Environment and Natural Resources
Government of the Northwest Territories

GNWT LANDS RECOMMENDED

DRAFT Conditions Annexed to and Forming Part of Land Use Permit # G19Q009

Part A: Scope of Permit

1. This Permit entitles the Permittee to conduct the following land-use operation:
 - a) Extracting, stockpiling, loading and hauling granular material from existing quarries located at km 235 and km 251 Dempster Highway # 8, Northwest Territories.
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 or Municipal laws.
4. This Permit is only valid in conjunction with a valid Quarry Permit issued by the Government of the Northwest Territories Department of Lands.

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

Act - the *Mackenzie Valley Resource Management Act*.

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

Archaeological Overview - a study of archaeological sites 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

Board - the [regional panel] Land and Water Board established under Part 3 of the Act.

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

Closure and Reclamation - the process and activities that facilitate the return of areas affected by the Project to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment, human activities, and the surrounding environment.

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 Fluid - 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.

Engineered Structure - any structure or facility designed and approved by a Professional Engineer, including but not limited to the [enter list of structures/facilities] associated with 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.

Fracturing Fluid - the fluid used to perform a hydraulic fracturing treatment, including the applicable base fluid and all additives.

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.

Oil and Gas Drilling Sump - a surface excavation, constructed of material that exhibits low permeability (hydraulic conductivity of less than 10^{-6} cm/s), for the purpose of depositing and containing Drilling Waste.

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.

Professional Engineer - a person registered with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists to practice as a Professional Engineer in the Northwest Territories as per the territorial *Engineering and Geoscience Professions Act*, and whose professional field of specialization is appropriate to address the components of the Project at hand.

Progressive Reclamation - Closure and Reclamation activities conducted during the operating phase of the project.

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.

Shut Down Period - The period of time between [DATE and DATE] each year, for the purpose of this operation.

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.

Spring Break-up – [March 31/April 15] each year, for the purpose of this operation.

Safety Data Sheet - a technical document, typically written by the manufacturer or supplier of a chemical, that provides information about the hazards associated with the product, advice about safe handling and storage, and emergency response procedures.

Sump - a human-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)

	Condition	Category
	26(1)(a) Location and Area	
1.	The Permittee shall only conduct this land-use operation on lands designated in the application.	LOCATION OF ACTIVITIES
2.	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
3.	Prior to the commencement of the land-use operation, the Permittee shall mark each corner of the land-use area.	MARK AREA
4.	The Permittee shall maintain the corner markings until the area is reclaimed.	CORNER POSTS
5.	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
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 STOCKPILE
	26(1)(b) Time	
7.	At least 48 hours prior to the initial commencement of the land-use operation, the Permittee's Field Supervisor shall contact an Inspector at (867) _777-8900_	INITIAL NOTIFICATION – CONTACT INSPECTOR
8.	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: 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
9.	At least ten days prior to [the Shut Down Period or Spring Break-up], the Permittee shall advise an Inspector of: a) the plan for removal or storage of equipment and materials; and b) when cleanup and Progressive Reclamation of the land	REPORTS BEFORE SEASONAL REMOVAL

	used will be completed.	
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; b) when final cleanup and reclamation of the land used will be completed; and c) when the Final Plan will be submitted. 	REPORTS BEFORE FINAL REMOVAL
11.	The Board and/or Inspector reserves the right to impose closure of any area to the Permittee during periods when dangers to natural resources are severe.	CLOSURE
	26(1)(c) Type and Size of Equipment	
12.	The Permittee shall only use equipment of a similar type, size, and number to that listed in the complete application.	USE APPROVED EQUIPMENT
	26(1)(d) Methods and Techniques	
13.	The Permittee shall not quarry to a depth below that of the water table. Do not quarry below existing pit floor.	QUARRY DEPTH
	26(1)(e) Type, Location, Capacity, and Operation of All Facilities	
14.	The Permittee shall ensure that the land use area is kept clean at all times.	CLEAN WORK AREA
	26(1)(f) Control or Prevention of Ponding of Water, Flooding, Erosion, Slides, and Subsidence of Land	
15.	The land-use operation shall not cause obstruction to any natural drainage.	NATURAL DRAINAGE
16.	The Permittee shall install and maintain suitable erosion control structures as the land-use operation progresses.	PROGRESSIVE EROSION CONTROL
17.	The Permittee shall apply appropriate mitigation at the first sign of erosion.	REPAIR EROSION
18.	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
19.	The Permittee shall not excavate land within 100 metres of	EXCAVATION SETBACK

	the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector.	
	26(1)(g) Use, Storage, Handling, and Ultimate Disposal of Any Chemical or Toxic Material	
20.	The Permittee shall dispose of all Toxic Material as described in the approved Waste Management Plan.	WASTE CHEMICAL DISPOSAL
21.	The Permittee shall dispose of all combustible Waste petroleum products by removal to an approved disposal facility.	WASTE PETROLEUM DISPOSAL
22.	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
	26(1)(h) Wildlife and Fish Habitat	
23.	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	
24.	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
25.	The Permittee shall dispose of all garbage, Waste, and debris as described in the application, unless otherwise authorized in writing by an Inspector.	REMOVE GARBAGE
	26(1)(j) Protection of Historical, Archaeological, and Burial Sites	
26.	The Permittee shall not knowingly remove, disturb, or displace any archaeological specimen or site.	SITE DISTURBANCE
27.	The Permittee shall not operate any vehicle or equipment	ARCHAEOLOGICAL

	within 150 metres of a known or suspected historical or archaeological site or burial ground.	BUFFER
28.	The Permittee shall, where a suspected archaeological or historical site, or burial ground is discovered: a) immediately suspend operations on the site; and b) notify the Board at (867) 777-4954 or an Inspector at (867) _777-8906_, and the Prince of Wales Northern Heritage Centre at 767-9347 ext. 71250 or ext. 71251.	SITE DISCOVERY AND NOTIFICATION
	26(1)(k) Objects and Places of Recreational, Scenic, and Ecological Value	
29.	The Permittee shall take all reasonable precautions to avoid impacts to traditional harvest activities.	TRADITIONAL USE
	26(1)(l) Security Deposit	
30.	All costs to remediate the area under this Permit are the responsibility of the Permittee.	RESPONSIBILITY FOR REMEDIATION COSTS
	26(1)(m) Fuel Storage	
31.	The Permittee shall: a) examine all Fuel Storage Containers and Tank for leaks; and b) repair all leaks immediately.	REPAIR LEAKS
32.	The Permittee shall not store any fuel on site during this landuse operation.	FUEL STORAGE
33.	The Permittee shall place Fuel Storage Containers and or Tanks a minimum of 100 metres from the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector.	FUEL STORAGE SETBACK
34.	The Permittee shall ensure that all fuel caches have adequate Secondary Containment.	FUEL CACHE SECONDARY CONTAINMENT
35.	The Permittee shall set up all refueling points with Secondary Containment.	SECONDARY CONTAINMENT - REFUELING
36.	The Permittee shall not allow petroleum products to spread to surrounding lands or Watercourses.	FUEL CONTAINMENT
37.	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,	SPILL CONTINGENCY PLAN

	technology, chemicals, or fuels, or as directed by the Board. Revisions to the plan shall be submitted to the Board for approval.	
38.	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
39.	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
40.	The Permittee shall clean up all leaks, spills, and contaminated material immediately	CLEAN UP SPILLS
41.	During the period of this Permit, if a spill occurs or is foreseeable, the Permittee shall: <ul style="list-style-type: none"> a) implement the approved Spill Contingency Plan; b) report it-immediately using the NU-NT Spill Report Form by one of the following methods: <ul style="list-style-type: none"> • Telephone: (867) 920-8130 • Fax: (867) 873-6924 • E-mail: spills@gov.nt.ca • <u>Online: Spill Reporting and Tracking Database</u> c) within 24 hours, notify the Board and an Inspector; and d) within 30 days of initially reporting the incident, submit a detailed report to the Board and an Inspector, including descriptions of causes, response actions, and any changes to procedures to prevent similar occurrences in the future. Any updates to this report shall be provided to the Board and an Inspector in writing as changes occur. 	REPORT SPILLS
	26(1)(n) Methods and Techniques for Debris and Brush Disposal	
42.	The Permittee shall not clear areas larger than identified in the complete application.	MINIMIZE AREA CLEARED
	26(1)(o) Restoration of the Lands	
43.	All areas affected by construction or removal activities shall be stabilized and landscaped to their pre-construction profiles, unless otherwise authorized in writing by an Inspector.	PRE-CONSTRUCTION PROFILES
44.	The Permittee shall dispose of all overburden as approved	DISPOSAL OF OVERBURDEN

	by the Board, or as otherwise authorized in writing by an Inspector.	
45.	Prior to the end of the land-use operation, the Permittee shall level all stockpiles of granular material located within the land use area.	LEVEL STOCKPILES
46.	Prior to the end of the land-use operation, the Permittee shall complete all cleanup and restoration of the lands used.	FINAL CLEANUP AND RESTORATION
47.	Prior to the end of the land-use operation, the Permittee shall prepare the site in such a manner as to facilitate natural revegetation.	NATURAL VEGETATION
48.	The Permittee shall carry out Progressive Reclamation of disturbed areas as soon as it is practical to do so.	PROGRESSIVE RECLAMATION
49.	Prior to the end of the land-use operation, 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	
50.	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	
51.	If nesting areas are encountered during the course of operations, the Permittee shall minimize all activity so as to not disturb them.	MIGRATORY BIRD NEST DISTURBANCE
52.	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
53.	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
54.	All revised plans submitted to the Board shall include a brief summary of the changes made to the plan.	SUMMARY OF CHANGES