

June 27, 2006

Sarah Baines
Regulatory Officer
Mackenzie Valley Land and Water Board
PO BOX 2130
Yellowknife, NT X1A 2P6

VIA FACSIMILE

Dear Ms. Baines

TAMERLANE VENTURES INC., MV2006C014 / MV2006L2-0003
Pine Point Pilot Project.

The Department of Environment and Natural Resources (ENR) has reviewed the above program and would like to provide the following comments based on the mandated responsibilities under the *Wildlife Act*, the *Forest Management Act (FMA)* and The *Environmental Protection Act (EPA)*.

Comments

Insufficiencies in the Project Description

ENR staff note several areas where the Project Description does not provide sufficient information:

- The Project Description presented by Tamerlane Ventures Inc (TVI) did not provide clear information on the footprint of the project. On map 1.4-1, it appears that some clearing of vegetation will have to be undertaken for site development but this is not discussed in section 5.4, Impacts on Vegetation.
- TVI states that impacts will be minimal as the area consists of several active quarries, highway #5 and that wildlife are accustomed to loaders, dozers, haul trucks and pickups. Despite this context of existing development, combined with past mineral, and oil and gas exploration occurring in the area, the proponent states that the project will not significantly add to any cumulative effects. As the proponent provides no analysis or justification for their conclusion, ENR staff suggest that a more

thorough investigation into cumulative impacts be undertaken by the proponent.

- Could TVI provide more details on the infiltration basin proposed as a site for sewage effluent treatment and other liquid waste. How will this facility be constructed? If the proposed design does not include a liner, the proponent should consider local geology (karst) and justify the use of an unlined facility given the potential for contaminant infiltration and transport by way of groundwater.
- We understand sewage effluent will report to the infiltration basin. Is there a solid stream to the sewage treatment plant discharge that will require disposal? If so, where will it be placed?
- Could the TVI characterize discharge associated with the Dense Media Separation process? Will all of the DMS discharge be recycled/stored temporarily/backfilled underground?
- Has the proponent considered a contingency plan in the event that the freeze curtain fails due to hydraulic head/blasting impacts?

Proposed Mitigations

The following list of proposed mitigations are presented by TVI. in their project description:

- Effective waste management to minimize encounters with wildlife;
- Machinery to be equipped with standard noise suppression equipment; and,
- Berms to be constructed as needed for noise attenuation.

Although there is no camp associated with this project, effective waste management will none-the-less be necessary to reduce the risk of attracting carnivores such as bears, wolverines and foxes. ENR's Food and Waste Management Guidelines should be adhered to for appropriate waste management strategies. These are attached for your reference.

Species at Risk

The federal Species at Risk Act (SARA) states that adverse effects on listed species must be identified, and regardless of significance, mitigated and monitored (s. 79). It is ENR's view that those species listed on Schedule 1, as well as those being considered for status under the Act (i.e. those species listed on Schedule 2 and 3 of the Act) be treated in a similar fashion consistent with the recommendations in "The Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada".¹

¹ <http://www.cws-scf.ec.gc.ca/publications/AbstractTemplate.cfm?lang=e&id=1059>

The following species are listed on or pending addition to Schedule 1 of SARA and have the potential to occur in the project area during the timing of operations:

- Wood bison
- Woodland caribou
- Wolverine
- Grizzly bear (spring/summer).
- Peregrine falcons (spring/summer)
- Short-eared owl

In field research conducted in September 2005 by EBA Engineering Consultants Ltd. for TVI observations of peregrine falcon, short-eared owl, wolverine, wood bison, woodland caribou confirmed these species in the project area. Mitigations necessary for reducing impacts to these species are presented below.

Specific Recommendations

ENR makes the following species specific recommendations that are necessary to reduce potential impacts in the project area:

Wildlife

- Disturbance of peregrine falcons and short-eared owls while nesting can affect incubation success, survival and/or fitness of the young. Therefore, if a nest site for either of these species is identified in the project area, a buffer of 1.5 km should be maintained between development activities and the nest site.
- As there is no camp associated with this project, impacts to wolverine and grizzly bear will be minimal. In the event that a grizzly bear is disturbed and/or encountered during project operations, information on the sighting should be forwarded to the local Wildlife officer at the earliest opportunity. This will allow ENR a greater ability to relocate bears that frequent areas of development before they become habituated and must be destroyed as nuisance wildlife.
- Mineral/salt licks are a key habitat area for ungulates and as such tend to attract them. If a mineral lick is present in the project area, the proponent should maintain a 300m buffer zone between any development activities and the lick ensuring minimal disturbance to the animals as they access these sites.
- If woodland caribou are encountered during development the proponent should shut down operations if they approach within 500m. When caribou are further than 500m away operations may resume. Caribou are

particularly vulnerable to disturbance during calving (May 1st to June 15th) and rutting (September 1st to Oct 15th).

- The presence of development activities in close proximity to an active wolf or fox den (presence of pups/kits) can stress the animals by causing them to increase their monitoring of development activities, in lieu of hunting, feeding their young and resting. It may also lead to conflicts that result in the destruction of the animal. Therefore, if an active wolf or fox den is observed in the project area a buffer of 800m for wolf, and 150m for fox, should be maintained between the den and any development activity, between May 1st and July 15th. Further, these sites should not be approached on foot by project personnel

Waste Disposal

ENR notes permission from the Hay River landfill to dispose of camp wastes under TVI's LUP MV2001C0084. Has TVI been given permission to dispose of waste at the Hay River landfill over the course of the proposed bulk sampling project?

- In reference to disposal of hazardous waste, ENR recommends TVI consult the Government of the Northwest Territories (GNWT) Environmental Guideline for the General Management of Hazardous Waste available on our website and consult ENR staff regarding any questions or concerns.

ENR website: <http://www.enr.gov.nt.ca/eps/leg.htm>

- TVI commits to water quality sampling for six months after the program completion. In the event that the sampling program does not proceed to full-scale mining, TVI should commit to water quality sampling until such time that demonstration of compliance with the licence criteria has been proven.

Spill Contingency Planning

In 2002, the GNWT published a plain language guide to the spill contingency planning and reporting regulations of the Environmental Protection Act, available on line: <http://www.enr.gov.nt.ca/eps/pdf/spillreq90.pdf>

Based on the recommendations contained in this document:

- Could TVI supply a site map indicating where fuel and other hazardous materials will be stored?
- TVI has provided the expected volumes of hydrocarbons to be brought on site. Please provide an inventory of any other hazardous materials that will

be used including volumetric estimates and Material Safety Data Sheets for each product.

Security

ENR staff note the issuance of LUP MV2001C0084 to the Kent Burns Group L.L.C. on December 24, 2001 now held by TVI following a permit reassignment and company ownership/name changes. The initial required security deposit of \$500 000 was reduced to \$60 000 following an amendment to the LUP on July 24, 2002.

- ENR recommends use of RECLAIM software to determine an adequate level of security for the proposed project to be provided in an irrevocable form of credit.

General Recommendations

ENR provides the following general recommendations with respect to sufficiently minimizing potential impacts to wildlife, including species at risk:

- Harassing wildlife can lead to greater expenditures of energy on the part of the animal and a loss of fitness. This is especially important for mammals in the winter and when female animals are still feeding their young through lactation. No wildlife should be disturbed, chased, or harassed by human beings on foot, in a motorized vehicle, or by aircraft.
- Although the concept of feeding small mammals and birds seems trivial it is in fact a large problem. The increase in local food supply will cause migration into the area of other wildlife and may bring in larger predators and scavengers as well. This may lead to nuisance wildlife that may be destroyed. The grouping together of large concentrations of animals also increases the potential for the spread of diseases. No wildlife should be purposefully encouraged to habituate to human presence (i.e. wildlife should not be fed).

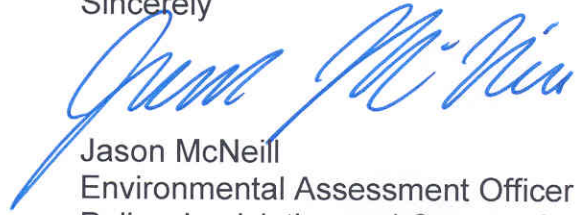
Requests of the Proponent

ENR makes the following request of TVI:

- To aid in the Department's tracking of development and management of impacts to wildlife we request that TVI . provide ENR with a record of any wildlife sightings made during the program (including, if possible, GPS locations). These data should be provided to ENR's South Slave Biologist Deborah Johnson, (867) 872-6408.

Should you have any questions regarding the above, please contact Jason McNeill, Environmental Assessment Officer at 920-8071.

Sincerely



Jason McNeill
Environmental Assessment Officer
Policy, Legislation and Communications
Environment and Natural Resources

C. Karin Clark
Environmental Assessment Specialist, Wildlife
ENR

Colleen Roche
Industrial Specialist (Mining),
Environmental Protection

Food and Waste Management

Minimizing the Attraction of Carnivores to a Camp

1. ENR strongly encourages the use of a properly installed electric fence designed for deterring bears and other carnivores.
2. Burning garbage in pits or barrels and storing garbage for fly-out are the most common causes of wildlife conflicts, regardless of the size of the camp. ENR requires the use of an approved incinerator² for the incineration of combustible camp garbage and kitchen wastes and encourages daily incineration of wastes. The incinerator should be housed within the electric fence.
3. Burning of waste products releases numerous contaminants, many being persistent and toxic, that can result in serious impacts to human and wildlife health through direct inhalation and bioaccumulation through food chains. The proponent should ensure that the amount of waste burned is reduced as much as possible through implementation of pollution prevention strategies.³ The objective should be to ensure that only food waste and food-contaminated waste is burned (the use of paper, cardboard and clean wood as supplementary fuel is acceptable).
4. The residual ash from incineration may also contain toxic contaminants and should be assessed in accordance with the *NWT Environmental Guideline for Industrial Waste Discharges* to determine the appropriate disposal method.
5. Storing refuse in a manner likely to attract wildlife is a violation of the Wildlife Act. Garbage stored in plywood boxes or in sheds develops a strong odour, which lingers for days. This odour will attract wildlife to the site. If garbage is going to be stored on site, it must be in a sealed container, to prevent wildlife from being attracted to the odours. If the camp proposes to fly or drive their garbage out, an animal proof, sealed container must be used for storing garbage on site.

² For large, permanent camps and/or operational facilities (e.g. mines), installation of an incineration device capable of meeting the emission limits established under the Canada-wide Standards (CWS) for Dioxins and Furans and the CWS for Mercury Emissions is required (both the Government of Canada and the Government of the Northwest Territories are signatories to these Standards). For small, temporary camps the use of a modified burn barrel (with grate, bottom draft, lid and chimney) may be acceptable. The proponent should review the incineration options available and provide justification for the selected device to the regulatory authority.

³ For example, purchasing policies that focus on reduced packaging. Other options include on-site diversion and segregation programs (i.e. the separation of non-food waste items suitable for storage and subsequent transport and disposal or recycling).

6. Unless within an electrified bear fence, the kitchen should be at least 50 meters from all other structures and the doors to the other structures should face the kitchen. Wherever possible, the kitchen should be down-wind of the other structures, to prevent a bear from walking through the camp to approach the kitchen.
7. All food in the camp should be stored in the kitchen or in a building attached to the kitchen, to ensure that there is only one area where food odours occur
8. All grey water pits should be a minimum of 50 meters from the nearest water body and should have lime added to them every second day.
9. Food should not be left in camp kitchens when the camp will be vacant for more than two weeks. This includes canned-goods and dry-goods. Any food that is to be left in the camp should be stored in a sealed container resistant to wildlife, such as a sealable 45-gallon drum.
10. No wildlife should be purposefully encouraged to habituate to human presence (i.e. it should be a camp policy to not feed wildlife).
11. All field personnel should complete a bear-safety training course.
12. Any defence of life and property kills must be reported, without delay, to ENR. All reasonable efforts must be made to ensure the hide and other valuable parts do not spoil and that these are turned over to a Renewable Resource Officer.