

**Ur Energy Inc.**

**Screech Lake Exploratory Drilling Project**

**Mackenzie Valley Environmental Impact Review Board**

**Information Request No. 1**

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## **IR0607-003-05**

**Source:** *BQCMB, LKDFN, Environment Canada, GNWT*

**To:** *UR Energy Inc.*

**Issue:** *Timing of Activities*

**Preamble:** *The LUP application is for a 5-year permit (January 1, 2007 to December 31, 2011). However, several sections of the application detail different time periods. Section 3 states March 1-May 31, 2007. Section 5 states that up to 20 drill holes may be developed over the course of the “two year program”, and later in the section states that “the initial program will begin as early as March 2007 and end in May 2007. The majority of drilling will occur during the winter of 2007/2008], but may continue for the remainder of the permit period” Section 14 states “March 1, 2007 to May 31, 2007 to complete proposed exploration as outlined above (5). May 31, 2007 to December 31, 2011 to complete further work contingent upon results of work outlined in (5)”.*

*The proposed timing of the development is unclear, particularly the timing of activities following the first season. The wording in the application could be interpreted to mean any time, i.e., at any time of the year, until 2011. Parties to the EA, as well as the Review Board, require clarification of the project timing.*

*Given the overlap of the proposed timing of the development with caribou presence in the project area, the Review Board requires more detailed information on the timing of activities related to the development.*

**Request:**

- 1. Please clarify the maximum duration of the proposed development and during which months activities would occur.*
- 2. Please provide any alternatives to the preferred timing that exists, e.g., carrying out the program earlier in the winter season. Give reasons why alternatives may be less favourable than the preferred timing.*
- 3. Clarify when during the five years of the proposed permit length the 20 holes will be drilled. Or if all 20 holes are to be drilled within a two year period why you require a five year permit. Also clarify why drill hole locations may not be known exactly up until 48 hours from when drilling is to commence.*
- 4. Provide detailed information on timing of proposed activities including:*
  - How long will it take to drill each hole?*
  - Will drilling be continuous during that time or intermittent?*
  - What is the anticipated length of time to move a rig?*
  - What is the length of time required for mobilization and demobilization?*

**RESPONSE IR0607-003-05 (01)**

The drilling program will be conducted in stages, as detailed in the LUP application. In the first stage, five drill holes are proposed. If the results are positive, the second stage would add 15 more holes for a maximum total of 20 drill holes. It is anticipated that the 20 hole program would take two years to implement. The exact number of holes that can be drilled in one season will depend on the drilling conditions encountered. If the results are negative, UrEnergy may re-consider the extent of the drilling program.

Initially, the exploration drilling program was scheduled for early to mid-winter, 2007 (*i.e.*, January to April) and this is the preferred timing of the program. Initial delays in the permitting process forced UrEnergy to re-examine the potential schedule for 2007 and it was revised to commence in March and end in May as detailed in the LUP application. UrEnergy would be willing to return to the January to April schedule for 2008 in order to potentially mitigate caribou migration concerns. Activities in 2007 will be dictated by the timing and success of the permitting process.

**RESPONSE IR0607-003-05 (02)**

As detailed in the environmental screening report (Golder 2006), a winter drilling program was determined to be the operating period that would minimize environmental and socio-economic effects including vegetation, tourism, and many wildlife issues. UrEnergy would be willing to return to the January to April schedule for 2008 in order to potentially mitigate caribou migration concerns.

A summer program is feasible from a logistics perspective but the potential impacts would need to be discussed. UrEnergy would be willing to discuss alternate timing of the program.

**RESPONSE IR0607-003-05 (03)**

The objective of the program was to drill the initial five holes during the three month winter period in 2006 and drill the remainder in the following year. Because of the timing of the Environmental Assessment, the window for drilling in the winter of 2007 will most likely not be available. Because of this and any other unforeseen delays, the application has been made for the longest period available (five years).

Initially, the drill sites will be selected based on airborne and ground geophysical data that was collected in 2005 and 2006. This interpretation of this data is currently on-going. After detailed review of the geophysical data, some specific drill locations were selected (see Figure 2.1 in the Environmental Screening Report). Exact co-ordinates for these should be known several weeks before commencement of field work. However, a drill hole's location will likely be contingent upon results of the prior hole.

Some examples of how the drilling program may be implemented include the following:

- If two holes are planned to test a large anomaly:
  - If the first hole determines that the anomaly clearly has no potential for ore, the second hole would not be drilled.
- If a single hole is planned:
  - If a single hole is drilled and returns positive results, a second or third hole may be drilled in a similar location because of the positive results. This is the nature of an exploratory drilling program.
- Locations will be prioritized, but if testing of the first several highest priority targets proved negative, some lower priority targets with different geophysical signatures might be selected for testing.
- A specific site may be selected based on geophysical information but field conditions such as edge of esker, small cliff or uneven ground could dictate that it be moved. Normally the distance would not be large but it could be several tens of metres.

Approximately six drill sites will be selected prior to the start of the program, but results of the first hole could govern the locations of the holes to follow.

#### **RESPONSE IR0607-003-05 (04)**

It is estimated that it will take one week to drill each hole. Once drilling of a hole is started, drilling will be continuous. It is estimated that it will take one day (eight to ten hours) to move a rig. At this time the length on time required for the mobilization and demobilization is unknown as it will depend on site-specific conditions.

## **IR0607-003-06**

*Source:* BQCMB, GNWT

*To:* UR Energy Inc.

*Issue:* Air Traffic

*Preamble:* *The permit application states that all movement of equipment and personnel will be by helicopter, but does not provide details concerning the timing, frequency, or number of flights that will occur for the drilling program or during camp set-up or removal.*

### *Request*

#### *Please describe:*

- 1. The number, timing, type and frequency of flights required for camp set up, support and removal, and for moving crews, equipment and supplies during the exploration work (to/from and within the study area), as well as*
- 2. Whether an airstrip is required for fixed wing aircraft and its length, if it is required.*

### **RESPONSE IR0607-003-06 (1)**

The number of flights for camp set-up and removal will depend on the type of aircraft available and the timing of the project. It is anticipated that there will be one flight per week for support.

### **RESPONSE IR0607-003-06 (2)**

An ice airstrip will be required for fixed wing aircraft. The length of the airstrip would need to be approximately 1200 m.

## **IR0607-003-07**

**Source:** *BQCMB, GNWT, Treaty 8 Tribal Corp., LKDFN*

**To:** *Developer*

**Issue:** *Best Practices*

**Preamble:** *Several parties submitted information requests asking for clarification on what the developer means by the term ‘best practices’. The developer’s application refers to best practices a number of times. For example, the report states that “the use of mufflers and best work practices should partially mitigate” these effects (pg 63). The application also refers to Exploration Guidelines for Saskatchewan that will be used as best practices.*

*Referring to a set of guidelines containing “best practices” does not provide sufficient information for the Review Board to determine if the development is likely to cause significant impacts on the environment. The developer must identify which best practices will be used under what circumstances and who will be responsible for these decisions.*

### **Request**

- 1. Please describe the relevance and applicability of the Saskatchewan guidelines to your operations in the Thelon watershed.*
- 2. Provide a listing and brief description of “best practices” for dealing with uranium if it is encountered.*
- 3. Please provide a listing and brief description of the “best practices” you are proposing to use to mitigate against impacts on caribou, migratory birds, and other wildlife.*
- 4. List and briefly explain what criteria will be used to decide when to apply a specific best practice or mitigation measure.*
- 5. Please identify the person or persons that would decide in the field which best practice or mitigation measure will be used. What qualifications are required of this person or these persons.*
- 6. Please clarify how archaeological resources will be protected during the operation, including a description of the qualification of the field personnel to recognize archaeological sites.*

## **RESPONSE IR0607-003-07 (1)**

The NWT currently has no guidelines for uranium exploration. Exploration for uranium in Saskatchewan has been ongoing for the last 35 years and continues to this day. Most of this drilling has been conducted in the northern boreal forest in winter under cold conditions. Drilling techniques proposed for the Thelon will be the same as practiced in Saskatchewan making the guidelines applicable.

The Saskatchewan guidelines were drafted based on the accumulated knowledge of hundreds of drilling programs and are the best guide to safe drilling practices available for the Thelon watershed.

### **RESPONSE IR0607-003-07 (2)**

The operating procedures listed in this response were partially drawn from the Mineral Exploration Guidelines for Saskatchewan (2005) and from the experience of engineers familiar with uranium exploration.

- All core containing uranium ore will be transported off site;
- For dealing with potentially contaminated waste drill water, the procedure will be as follows:
  - The casing is sealed with a packing box (a "T" junction that controls the flow of mud and water). Potentially contaminated water flows out into a sludge separator that settles mud from water with a riffle system.
  - A portion of the cleaned water is turned back into the drill hole and the remainder is pumped back to the drill. The sludge is pumped into "sausages", a continuous heavy-mil plastic, eight inches in diameter, utilized in four to six feet lengths. These sausages are allowed to freeze for easier handling. If a sausage does not exhibit above background radiation, it can be treated as normal drill cuttings.
  - The separator systems will be used whenever there is contact with mineralization and can be applied in anticipation of reaching a mineralized zone;
- If uranium ore is intersected, an assay sample may be taken for laboratory analysis. This sample would be placed in a pre-prepared shipping container provided by the laboratory specifically designed to ship uranium samples. This material would be shipped to the laboratory and would not be returned to the site;
- Any drill hole that encounters mineralization with uranium content greater than 1.0% over a length >1 meter, and with a meter-percent concentration >5.0, will be sealed by grouting (cement) over the entire length of the mineralization zone and not less than 10 meters above or below each mineralization zone; and,
- Any drill mud solids or cuttings with a uranium concentration greater than 0.05 percent are to be collected and then disposed of down the drill hole and sealed with cement.

### **RESPONSE IR0607-003-07 (3)**

In their information request response (IR0606-003-11), the GNWT listed a number restrictions they would recommend for the UrEnergy drilling program to reduce sensory impacts to caribou. They included:

- “Activities not occur during the month on May when cows are migrating towards their respective calving grounds.
- If caribou are encountered during development the proponent should shut down operations if they approach within 500 m of drilling operations/sites; suspend activities including drilling, aircraft overflights, and ATV or snowmobile use outside the immediate vicinity of the camp. When caribou are further than 500 m away operations may resume.
- Aircrafts overflights by helicopter and fixed-wing aircraft can disturb caribou increasing stress to the animals and potentially extending to effects on overall health and condition, especially during late winter and spring when animals have a negative energy balance. As a result, minimum altitudes of no less than 300 m should be maintained at all times other than landing or take off. Further, wildlife should not be approached closer than 500 m, chased or harassed by aircraft of other motorized vehicles.
- Concentrations of caribou should be avoided by low-level aircraft at all times (altitude less than 300 m).“

The following is a list of operating procedures that will be used to mitigate the effects of the exploration program on caribou, migratory birds, and other wildlife that incorporates the GNWT’s recommendations.

#### Caribou

- UrEnergy is willing to avoid operating in May to mitigate concerns by the GNWT and others over potential impacts to migrating cows;
- Caribou have the “right-of-way”, and will not be blocked from moving through the project area. If the presence of caribou represents a risk to themselves or humans, then the animals will be herded away from the area. All herding actions will begin with the least amount of disturbance to caribou (e.g., walking towards the animals, clapping hands, and talking). The objective is deter caribou from hazardous situations so that the risk of injury is decreased, but deterrent actions should not cause unnecessary stress to the animals. All deterrent actions will be recorded. If a caribou comes within 500 m of drilling operations/sites, activities will be suspended until the animal leaves the area as recommended by the GNWT;
- A strong attempt will be made to fly all aircraft at a minimum of 300 m above ground level, except during take off and landing.
- Adhere to all management practices described for “Other Wildlife”.

### Migratory Birds

In general, the majority of the exploration program will occur during the winter when migratory birds are not in the area. However, the following operating procedures will be implemented to mitigate impacts on migratory birds.

- Land clearing activities (if necessary) will be conducted during the winter outside of the nesting season (May through August) for migratory birds.
- Prevent birds from nesting on man-made structures.
- If a nest site is established on a man-made structure and eggs are present, avoid the nest as much as possible and monitor for nest success.
- Adhere to all best management practices described for “Other Wildlife”.

### Other Wildlife (includes all wildlife)

- Prohibit the use of firearms on site with the exception of bear deterrence.
- Prohibit hunting, trapping, and fishing by UR Energy employees and contractors.
- All wildlife has the “right-of-way”.
- No feeding or harassment of wildlife.
- Perform exploration activities (camp layout, drilling) in a manner that limits the size of the project footprint.
- All fuel burning equipment will meet emission guidelines and will be equipped with mufflers.
- Use “good house keeping” practices to maintain a garbage-free camp and exploration area, which should limit attraction of animals to the project. All combustible garbage will be burned in an approved incinerator and ash residue will be placed in metal containers and disposed of in Yellowknife. Non-combustible waste will be stored in the camp area and shipped to Yellowknife for disposal.
- All chemicals will be stored in double-walled containers. In the event of a spill, the Spill Contingency Plan (as described in the Land Use Permit Application) will be implemented immediately, and the spill reported to the appropriate authorities. Used chemicals will be transported to Yellowknife for disposal.
- All materials, chemicals, and equipment will be removed from the drill sites and camp area at completion of the project as described in the Restoration Plan of the Land Use Permit Application. The intent is to return the area as close as possible to the natural state.

**RESPONSE IR0607-003-07 (4)**

The term “best practices” detailed in the in the LUP application and Environmental Screening Document (Golder 2006) refers to the normal operating procedures that will be used during all phases of this exploration program and not to a set of special procedures that would be invoked should a problem occur. The operating procedures and mitigation measures for camp maintenance, drilling and other activities were described as “best practices” because UrEnergy chose to use the best operating procedures available. The term “best practices” was used to describe the normal operating procedures since they were the “best” that were available and UrEnergy regrets any confusion the use of this term may have caused. UrEnergy is confident that the implementation of the operating procedures will result in the impact predictions listed in the Environmental Screening Document (Golder 2006).

**RESPONSE IR0607-003-07 (5)**

The camp manager will be responsible for ensuring that the operating procedures and mitigation measures detailed in the LUP application and Environmental Screening Document (Golder 2006) are followed. The camp manager will be a geologist with experience in directing an exploratory drilling program in cold weather conditions. Technical experts will be available for consultation if needed.

**RESPONSE IR 0607-003-07 (6)**

It is not anticipated that an archaeologist will be required for the winter drilling program. Although the program is located in an area that has potential to contain archaeological sites, the proposed footprint is small and it is not anticipated that archaeological materials will be encountered. All known archaeological sites will be avoided. A confidential map of known archaeological resource locations in the immediate vicinity of the site will be made available to the field crew personnel to assist them in avoidance. A guide to recognizing archaeological artifacts and features that may be encountered will also be provided to field staff. This guide will also include instructions on what to do if archaeological materials are encountered and contact information for the Project archaeologist and the archaeologists at the PWNHC.

## **IR0607-003-08**

**Source:** BQCMB

**To:** UR Energy Inc.

**Issue:** Caribou Mitigation

**Preamble:** IR0607-003-08 requests a listing and brief description of “best practices” proposed by the developer in general. Given the importance of caribou to the socio-economic and cultural well being of aboriginal communities and given the recently observed decline in the caribou herds utilizing the project area, more detailed information on the prevention of impacts on caribou is required.

*The BQCMB submitted that “although the proponent correctly identifies the project area as being located on a primary spring migration route for barren ground caribou, they propose that drilling activity occur during the caribou spring migration period (April and May). It is unclear whether the proponent recognizes the vulnerability of pregnant caribou during this period or the risk that disturbance may impose on the health of caribou cows or their fetuses, particularly during the month of May when cows are in poorest condition and may be weakened by further stresses. The permit application and application fail to adequately describe potential impacts to barren ground caribou during spring migration and mitigation measures to address these issues.”*

*Similarly, the application states that “As much of the exploration activities will occur during winter months a low residual impact is anticipated for wildlife” (p. 63). However, the proponent acknowledges that there may be caribou present in the area during the winter period. The permit application and application fail to adequately describe potential impacts of exploration on barren ground caribou in their winter range and mitigation measures to address these issues.*

### **Request**

*Please provide additional detail on the following:*

- 1. Actions that will be taken to avoid or mitigate potential impacts from camp set up, support and maintenance, and exploration activities while caribou are migrating through the study area, particularly where drilling will occur within 5 km of key water crossings.*
- 2. Measures that will be employed to ensure that the residual impact of exploration activities on barren-ground caribou during winter will be low. This should include actions that will be taken to reduce the impacts on caribou during winter from drilling and from flights required to move people or materials.*

### **RESPONSE IR0607-003-08 (1)**

A complete list of actions that will be used to mitigate effects on caribou migrating through the area during the exploration program are provided in IR0607-003-07 (3). These mitigation measures are intended to limit the local effects from the project on pregnant females and other caribou during the northern migration, and include:

- avoid operating in May;
- suspending operations when a caribou comes within 500 m of the drilling activities until the animal leaves the 500 m buffer area;
- not blocking the movement of caribou through the area;
- using low disturbance techniques (walking towards animals) to deter animals from hazardous areas;
- make a strong attempt to fly all aircraft at a minimum of 300 m above ground level (except during landing and take off); and,
- restrict drilling activities and camp layout to as small an area as possible to limit the size of the project footprint and associated zone of disturbance.

### **RESPONSE IR0607-003-08 (2)**

Mitigation measures used to limit impacts on caribou during the winter include those used for caribou during the northern migration (see IR0607-003-08 [1]). A complete list of mitigation measures that will be used to reduce the effects from the exploration program on caribou during the winter are provided in IR0607-003-07 (3). These mitigation measures are intended to limit the local effects of the project on females, young of the year, and other caribou that may include the area within their winter range.

## **IR0607-003-09**

**Source:** *BQCMB, GNWT, Tribal 8 Treaty Corporation, LKDFN*

**To:** *UR Energy Inc.*

**Issue:** *Methods and Conclusions*

**Preamble:** *Several parties indicated that the developer's application provides a number of conclusions without providing sufficient analysis or information on how the conclusion was derived. For example, the BQCMB submitted that the MVLWB approved a land use permit for Uravan's Boomerang Lake operation for May 2006 – May 2008, and Ur-Energy has requested a permit for Jan/07 to Dec/11. Therefore there is potential for the Uravan and Ur-Energy drilling programs to be run concurrently in winter-spring 2007/08, or perhaps additional years if Uravan receives additional permits or extensions. Consequently, exploration activities may occur at the same time on both sides of the Thelon River (approximately 15 km apart) in an area which has been identified as a primary spring migration route for barren ground caribou, and where there are many key water crossings. The authors conclude that both overall impacts on wildlife and cumulative impacts "are anticipated to have a negligible environmental consequence" (p. 64).*

*In another example the BQCMB points out that according to the application, traditional hunting and trapping by Lutsel K'e residents occurs in the region (p. 45), fishing and hunting have been practiced by up to 74% of the people of Lutsel K'e as recently as 2003, up to 34% of residents have trapped as recently as 1998. These are some of the highest rates of traditional land use for NWT communities (p. 57). The authors appear to have only evaluated the direct effects of exploration on current land use activities such as trapping and hunting, but not any indirect impacts, such as displacement of animals, to conclude that the residual impacts of the exploration project on traditional land uses will be negligible (p. 65).*

*The LKDFN also points out that Section 5 of the application states that all holes will be "located in close proximity to Screech Lake (within 1.5km of the western end of Screech Lake), but may proceed into the other proposed areas depending on the findings. It is possible that drilling will take place near the Screech Lake shoreline." Furthermore, the application states that five initial holes are proposed, but if the results are positive a maximum of 20 holes may be developed (Section 5). Later in the same section, it states that "the final location coordinates of each of the drill sites will be submitted to the Site Inspector at least 48 hours before the start of drilling activities".*

*Section 5 of the application states that “during a previous drill program it was observed that permafrost was not present at the Screech Lake location”. The application (3.5.1) states that “the regionally present permafrost layer is not present in the immediate vicinity of Screech Lake”. However, later the report states “it is expected that concerns of operations on permafrost will be the primary focus in the study area” (4.3.2.1).*

*Section 6 of the application under Traditional Land Use states that “hunting and trapping activities occur within the region of the target area, mitigation measures include no hunting or trapping and no disturbance linked to these activities”. As well, the Golder report states that “available databases and publications were reviewed to determine traditional land use around the Screech Lake area. Government regulators, hunter trapper organizations, and local outfitters were consulted to identify hunting and trapping activities in the Screech Lake area” (6.1).*

*Moreover, the application states that “Great Canadian Ecoventures reported bringing approximately 200 people through the upper Thelon River each year, which includes the locally named “Double Barrel Lake” located less than 15km south of the Screech Lake area”, and then goes on to state that “with the exception of canoeing, the overall recreation potential of the area has been described as limited (INAC 1979)” (6.2.3.8).*

*Note: Pursuant to the work plan for EA0607-003 this information request is not intended to result in significant new data collection or analysis. Rather it is aimed at revealing the analysis that has already been conducted to justify certain conclusions by the developer.*

## **Request**

### **Please provide:**

- 1. The methods and results of the analysis conducted to determine that residual impacts on caribou will be minor.*
- 2. The methods and results of the analysis conducted to determine that overall impacts on wildlife and cumulative impacts (i.e., in combination with other developments) will have a negligible environmental consequence.*
- 3. Methods and results of assessing the indirect effects of the proposed project on traditional caribou harvesting. These indirect effects would include a possible change in migration routes to avoid the project area that could result in reduced availability of caribou for hunters from Lutsel K'e.*
- 4. What information was used to determine that the project would have a negligible impact on SARA and COSEWIC listed species (i.e., grizzly bear, wolverine, peregrine falcon, short-eared owl), including cumulative impacts*

- in combination with other developments, e.g., Uravan's nearby exploration program.*
- 5. Confirmation that locations of drill holes cannot be determined in advance. Also describe how much flexibility exist in the selection of locations. For example, can techniques such as directional drilling be used?*
  - 6. A definition of the "immediate vicinity" of Screech Lake (i.e., does it include only the area outlined in the application. Has the existence/non-existence of permafrost been confirmed for the other potential drilling locations outlined in the application?*
  - 7. Clarification of the statements regarding absence of permafrost: if there is no permafrost in the Screech Lake area, why would concerns of operations on permafrost be the primary focus?*
  - 8. Clarification of the statement in Section 6 of the application regarding no hunting and trapping as mitigation; does this mean no hunting and trapping by the developer's employees or contractors? Also of the statement regarding "no disturbance linked to these activities". How will you ensure that First Nations people who may be hunting and trapping in the area (and the animals they are hunting and trapping) will not be disturbed by the noise from drill rigs/helicopters/airplanes, and the presence of an exploration camp in what was a pristine wilderness area?*
  - 9. Any information on community consultation you may have conducted in addition to that reported in the application.*
  - 10. A clarification of how potential impacts on tourism were assessed given that the 1979 report from INAC cited in the application may be outdated.*
  - 11. Where reference to cumulative effects is made in the application, which other developments were considered.*

## **RESPONSE IR0607-003-09 (1 & 2)**

The methods and definitions for impact assessment criteria are described in the Environmental Screening Document for the Project. The Screening Document provides a qualitative assessment of the local residual impacts from the exploration program on caribou, and other wildlife species and habitat. A qualitative assessment of the potential cumulative impacts from the Project in combination with the Uravan exploration program also is provided (including the spatial and temporal boundaries used to complete the assessment of cumulative effects) in the Screening Document.

The amount of information and type of analyses used in an environmental screening report, such as the report submitted for this project, is much different than an environmental assessment report. Screening reports mostly contain limited qualitative data, and subsequently, the analyses and impact predictions

are qualitative. In contrast, environmental assessment reports contain multiple years of quantitative and qualitative measurements which are then used for a detailed analyses of impact predictions. Thus, the level of detail for methods and results in the Screening Document for the Project is significantly less compared to an environmental assessment report.

In the Screening Document for the Project, local and cumulative residual impact predictions for caribou and other wildlife were based on the expected spatial and temporal extent of effects from the exploration program and the success of mitigation measures (see IR0607-003-07 [3] for list of mitigation measures). The program will involve only one drill rig and a ten man camp. Drilling will last approximately three months during the period from January to April for two years (if 20 holes are drilled). Exact starting and end dates will depend upon local weather conditions.

The timing of the program is expected to have a negligible influence on migratory birds as most species do not arrive to the area until late May. Best practices are predicted to mitigate potential effects on caribou and other wildlife that may move through the area during the three months of exploration. The extent of direct and indirect effects will be associated with the drill rig, camp, and use of a helicopter to ferry workers and equipment to and around the project area. During the drilling program, the camp and drill rig may be up to 12 km apart, which would reduce the magnitude of effects from each disturbance. Drilling during frozen ground conditions decreases the impact to soil, vegetation, and habitat. Analysis of predicted air and noise emissions are expected to generate negligible effects on the environment. Thus, residual impacts on all wildlife from the Project are expected to occur during a three month period, and localized to the area adjacent to the camp and drill rig. The distance between the Project and the Uravan exploration program is about 15 km, which should allow individual animals time to recover from the localized disturbance associated with either of these projects.

The overall impact on caribou and other wildlife from the local and cumulative effects of the Project should be negligible. Animals will likely modify their movement and behaviour as they approach the camp and drill rig, but these changes should not result in a measurable impact to the health of individuals or the population.

### **RESPONSE IR0607-003-09 (3)**

As described in IR0607-003-09 (1, 2), the methods and results for the Screening Document are based on qualitative information and impact predictions. Because the effects of the exploration program on caribou are predicted to be negligible, the impact on traditional caribou harvest should also be negligible. In addition, the timing of the drilling program will occur several months after the southern migration of caribou to their wintering grounds. The behaviour and movement of

individuals that encounter the exploration program likely will be altered, but the change should not alter the overall migration route of the individual or the herd.

**RESPONSE IR0607-003-09 (4)**

As described in IR0607-003-09 (1, 2), qualitative information was used to predict impacts from the exploration program on caribou and other wildlife which includes SARA and COSEWIC listed species. Because the exploration program is scheduled in winter, drilling activities should have little to no influence on migratory birds such as peregrine falcons and short-eared owls. The Project may result in some disturbance to individual wolverine, or grizzly bears that have emerged from hibernation. However, consistent and proper disposal of food garbage, and appropriate storage of unused and used chemicals should mitigate attraction of carnivores to the Project and decrease the risk of mortality to animals.

**RESPONSE IR0607-003-09 (5)**

The process for drill hole selection and the flexibility in specific hole location was presented in R0607-003-05 (03). In summary, the location of holes will depend on the initial results of drilling. Approximately six drill sites will be selected prior to the start of the program, but results of the first hole could govern the locations of the holes to follow.

Directional drilling is not an applicable drilling technique for this type of exploration program. Holes will be drilled to a depth of 600 m or more in an attempt to intersect uranium ore. Directional drilling would not reduce any potential impacts to the environment.

**RESPONSE IR0607-003-09 (6)**

The immediate vicinity of Screech Lake is the area identified in Figure 2-1 in the Environmental Screening Document (Golder 2006). The existence of permafrost has not confirmed or denied for other proposed drilling locations since no drilling has occurred in these areas to date. UrEnergy can report their findings on permafrost if desired.

**RESPONSE IR0607-003-09 (7)**

It is unknown at this time if permafrost exists at proposed drilling locations away from the immediate area of Screech Lake. However, since permafrost could exist in these areas, the safest approach was to assume that it exists and develop operating procedures accordingly.

### **RESPONSE IR0607-003-09 (8)**

To clarify the issue regarding no hunting and trapping, this policy will apply to all UR Energy employees and contractors, and represents a most efficient way to mitigate impacts to all wildlife populations (see IR0607-003-07 [3]).

To clarify the statement “no disturbance linked to these activities”, the statement is misleading and out of context with the topic sentence. The statement was meant to imply that by implementing a no hunting and trapping policy for employees and contractors, there will be no possibility of disturbance (or impacts) to wildlife from these activities. The Screening Document predicts that the presence of the exploration program will likely disturb traditional and non-traditional land users that encounter the Project, but the impacts should be negligible (see IR0607-003-09 [3] and IR0607-003-12).

### **RESPONSE IR0607-003-09 (9)**

No additional community consultation has occurred since those indicated in the reported application, however, a number of follow-up items from these consultations have been completed. These include:

- A copy of the Saskatchewan Regulations have been sent to DKFN.
- As requested, baseline studies in the project area started in the summer of 2006 and will continue into 2007. The studies included:
  - a summer aquatics program (collection of water, sediment, benthics and fish inventory and fish tissue chemistry and habitat mapping); and,
  - a terrestrial program (vegetation classification, wildlife aerial survey and wildlife track counts within the regional study area).
- During the aquatics baseline program, a number of community representatives from Lutsel K'e were taken to Screech Lake for tour of the area.
- An information session was held by INAC and a trip for representative members of Lutsel K'e and Fort Resolution were taken to visit to an existing uranium mine to help learn about uranium mining.

### **RESPONSE IR0607-003-09 (10)**

The information available was used at the time of the assessment. Information Request IR0607-003-01 and IR0607-003-03 addressed to the Government of the Northwest Territories had requested additional current information on tourism.

**RESPONSE IR0607-003-09 (11)**

A cumulative effects assessment was presented in Section 9.0 of the Environmental Screening Report (Golder 2006). The exploration program by Uravan Minerals Limited was the only project considered in the assessment.

## **IR0607-003-10**

**Source:** *LKDFN*

**To:** *Ur Energy Inc.*

**Issue:** *Noise Impacts*

**Preamble:** *In Section 6 of the LUP application, for noise levels it states that “the proposed activity is local, of short duration and the impact is reversible therefore the overall impact is considered negligible”.*

**Request:**

- 1. Has noise from helicopter and airplane activity been factored into the overall estimate of noise levels, or is it just for the drill rig?*
- 2. Clarify how the impacts from noise, not just the presence of noise are reversible.*
- 3. Has the impact been assessed separately for humans and animals and if so for which animal species?*

### **RESPONSE IR0607-003-10 (1)**

The noise impact assessed was solely for the drill rig. Noise from helicopter and airplane activity has not been factored into the overall estimate of noise levels. This will be intermittent activity that will not significantly affect long-term noise levels. Flights into camp will occur approximately once a week during daytime hours.

### **RESPONSE IR0607-003-10 (2)**

Reversibility is to measure whether the noise effect on the receptor can or cannot be reversed. In terms of people, irreversible effects occur when hearing damage occurs. Occupational Health and Safety regulations typically require hearing protection for continuous noise levels higher than 85 dBA with a duration of eight hours (ACGIH 2006). The predicted noise level at the any potential receptor at 1500 m is 26 dBA. This noise level is well below the level that can pose any long term noise exposure hazard to a person. The noise impact is reversible since, when the noise emission is gone there will be no residual impact to people.

### **RESPONSE IR0607-003-10 (3)**

The assessment focussed on the effects of noise on both wildlife and people. Please see Section 8.0 of the Environmental Screening Report (Golder 2006) for the effects of noise on wildlife. Species included in the assessment were caribou, wolverine, muskox, and grizzly bear.

## **IR0607-003-12**

**Source:** LKDFN  
**To:** Developer  
**Issue:** Impacts on Non-Traditional Land Use

**Preamble:** *Section 6 of the application under Non-Traditional Land Use states that “non-traditional trap lines are not registered within 50 km of Screech Lake, and domestic and sport hunting is conducted through Artillery Lake (150 km west). It is anticipated that the winter timing will reduce any disturbance...” However, the Golder report states that “domestic hunting and fishing information is unavailable” (6.2.3.2).*

**Request:**

- 1. Clarify how winter timing will reduce disturbance to both trappers (who operate mainly in the winter months) and the animals they are trapping, who often have large home ranges and may very well be passing through the Screech Lake area at some time during drilling operations.*
- 2. Clarify how winter timing will reduce disturbance to domestic hunting, especially given that there is no information available. The Golder report (4.2.2.1) states that “the Screech Lake program area is located in the spring range of the Beverly herd and is used between mid-March and late May” (times when drilling is likely to be occurring), that “some caribou of the Bathurst herd over-winter near the Screech Lake Program area”, and that the Qamanirjuaq herd “may use habitats near the Screech Lake Program area during spring/fall migration and the post-calving period”. In particular, please clarify the following statement: “Although the hunting season for most species is during the anticipated drilling Program, it is anticipated that the winter exploration activity will reduce any disturbance of hunting activity” (Golder report, 8.2.9). If the hunting season coincides with the timing of the drilling program, how will this reduce disturbance of hunting activity?*

## **RESPONSE IR 0607-003-12 (1 & 2)**

The LKDFN has made some valid comments regarding the report, and the conclusions made in Sections 8 of the report should be restated. The following clarifications and restatements are therefore provided, with regards to Sections 8.2.8 (Traditional Land Use) and 8.2.9 (Non-Traditional Land Use).

- The timing of the drilling program may reduce disturbance to wildlife because many species will either be not present (*e.g.*, migratory birds) or will be denning (*e.g.*, grizzly bears and ground squirrels). It is acknowledged that species active and present in the study area during the winter, such as caribou and small carnivores, may still be affected by winter drilling.
- As there are no non-traditional trap lines within 50 km of the Project, it is anticipated that the exploration program will have a negligible effect on non-traditional trappers.
- No information was available regarding traditional trappers, but the possibility does exist for disturbance to these trappers should they decide to trap in the vicinity of the Screech Lake project.
- There is insufficient information to fully determine how the timing of the drilling program will affect hunting activity, traditional or non-traditional.

Regardless of these restatements and clarifications, no changes to the environmental consequence to traditional and non-traditional land use impact predictions are necessary. The limited amount of information regarding traditional and non-traditional land use in the area does decrease the level of certainty associated with these impact predictions, but the predictions should also be viewed within the context of a screening document (see IR0607-003-09 [1, 2]).