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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: ___Diamonds North_____Licence No: _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: **__Graham Gill__** Tel: **604.689.2010** Fax: **604.484.7143** Email: **g.gill@diamondsnorth.com**

2. Project Manager**: Graham Gill** Tel: **604.689.2010** Fax: **_604.484.7143** E-mail: _ **g.gill@diamondsnorth.com**

3. Does the applicant hold the necessary property rights? **Yes**

4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)? If so, please provide letter of authorization. **No.**

5. Duration of the Project

   ☐ One year or less Start and completion dates
   x Multi Year:

   If Multi-Year indicate proposed schedule of on site activities
   Start: **__Jan 1, 2008** completion:**__Dec. 31st, 2013____**

CAMP CLASSIFICATION

6. Type of Camp

   ☐ Mobile (self-propelled)
   x Temporary
   ☐ Seasonally Occupied: _____
   ☐ Permanent
   ☐ Other:_____

7. What is the design, maximum and expected average population of the camp?
   The Amaruk camp consists of 15 tents, capable of housing up to 30 people. It is expected to service approximately 3000 person days of work in 2008. Mandays for subsequent years are not yet available.

The Siku camp consists of six tents capable of housing 12 people. It is expected to service approximately 1000 person days in 2008.

8. Provide history of the site if it has been used in the past.

Both camp sites have been used in the past. The main Amaruk camp was first established by BHP Billiton in 2005 and has been used in 2006 and 2007 by Diamonds North. The Siku camp was constructed in 2007 by Diamonds North.

CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.

The Amaruk camp is located at 68 degrees, 07 minutes, 40 seconds north and 90 degrees, 04 minutes, 40 seconds west on the western shore of a small unnamed lake approximately 600 metres east of the Nurraqsiuruik River and 46 kilometres SSE of the community of Kugaaruk, NT. The Siku camp is located at 67 degrees, 36 minutes, 20 seconds north and 92 degrees, 28 minutes, 03 seconds west on the northern shore of a large unnamed lake approximately 24 kilometres south of Darby Lake. This camp is located approximately 150 kms SW of Kugaaruk.

10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.

Both sites were chosen for a combination of proximity to the work programs, airstrip potential, clean drinking water and sandy substrate.
See attached map figure 1 for location as well as pictures provided.

11. Is the camp or any aspect of the project located on:

x Crown Lands Permit Number (s)/Expiry Date:N2005C0012 June 16, 2009___
☐ Commissioners Lands Permit Number (s)/Expiry Date: _____
x Inuit Owned Lands Permit Number (s)/Expiry Date:KTL305C012, April 30, 2008
Note: Only the Amaruk camp is on Inuit Owned Land

12. Closest Communities (direction and distance in km):
Amaruk camp located 46 kilometres SSE of the community of Kugaaruk, NT.
Siku camp is located approximately 150 kms SW of Kugaaruk.

13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?

A plain language summary of the proposed work has been produced, translated into Slavics and submitted for distribution. Diamonds North has in the past and will continue in the future to provide updates and seek comments and suggestions from the community of Kugaaruk through public meetings and consultation.

14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?

No, there are no expected impacts on traditional water use, local fish or wildlife as a result of this program and none have been documented since the project began in 2006. No impacts to fish or wildlife habitats are expected as the work programs are subject to various terms and conditions that mitigate against such impact.

PURPOSE OF THE CAMP

15.
- **x** Mining (includes exploration drilling)
- ☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.) (Omit questions # 16 to 21)
- ☐ Other _____

16. Activities (check all applicable)

- **x** Preliminary site visit
- **x** Prospecting
- **x** Geological mapping
- **x** Geophysical survey
- **x** Diamond drilling
- **x** Reverse circulation drilling
- ☐ Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)
- ☐ Other: _____

17. Type of deposit (exploration focus):

- ☐ Lead Zinc
- **x**☐ Diamond
- ☐ Gold
- Uranium
- ☐ Other: _____

DRILLING INFORMATION

18. Drilling Activities

- **x** Land Based drilling
- **x**☐ Drilling on ice

19. Describe what will be done with drill cuttings?

Drill cuttings will be collected in properly constructed sump or natural depression on land no less than 30 metres away from the normal high water mark of all water bodies to prevent transport into any water body. A typical 100 metre long hole will only create 0.14 cubic metres of cuttings. Any cuttings returned while drilling on ice will not be left on ice but will be pumped to a sump or natural depression on shore with the use of a Poly-drill system.

20. Describe what will be done with drill water?

All drill water will be collected in the sump described in detail in section 19 above whereby particulate matter can settle out or be filtered as necessary to prevent transport into any water body.

21. List the brand names and constituents of the drill additives to be used? Includes MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.

All drill additives proposed are biodegradeable and environmentally friendly.
MSDS sheets are provided as attachments to the original water licence application

22. Will any core testing be done on site? Describe.

Core samples collected will be flown by helicopter to camp where it will be geologically logged. Core intervals of interest identified by the geologist will be split, bagged and placed in pails and shipped to an approved analytical lab for analysis. No other testing will be conducted.

SPILL CONTINGENCY PLANNING

23. The proponent is required to have a site specific Spill Contingency Plan prepared and submitted with the application This Plan should be prepared in accordance with the *NWT Environmental Protection Act, Spill Contingency Planning and Reporting Regulations, July 22, 1998* and *A Guide to the Spill Contingency Planning and Reporting Regulations, June 2002.* Please include for review.

Diamonds North Spill Contingency Plan provided as attachment with original water licence.

24. How many spill kits will be on site and where will they be located?

The number of spill kits will be dependent upon the number of drills operating as well as the number of fuel caches. A spill kit will be located in camp, at each operating drill as well as at each fuel cache.

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

Heating Oil: 110 – 205 L drums, 22,550 L total
Diesel: 80 205 L drums, 16,400 L total
Propane: 50 100 lb cylinders, 5,000 lbs total
Helicopter Jet B fuel: 555 205 L drums 113,775 L
Gas: 3 – 205 L drums, 615L total

Propane cylinders will be stored upright in the appropriate storage areas. Opened diesel drums will also be stored upright. Full unopened diesel and Helicopter Jet A/B fuel will be stored on their side in the designated fuel caches.

Diesel, Jet fuel and gas is stored in 45 gallon drums lying flat on the ground in areas of higher relief and at least 30 metres from the high water mark of any water body. All caches to be temporary.

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

Water for domestic use at the camps will be pulled on an as needed basis from the 2 lakes described earlier and shown on the attached map.
Water for drilling purposes will be drawn from an appropriately identified lake near the drill site. Drill collar locations not known at this time.

27. Estimated water use (in cubic metres/day):

x Domestic Use: **<10-20 m3/day** Water Source: **Lakes adjacent to camps**
x Drilling: **<60m3/day** Water Source: **surface lakes**
☐ Other: _____ Water Source: _____

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? (see *DFO 1995, Freshwater Intake End-of-Pipe Fish Screen Guideline*) Describe:
Camp: Either a lakeshore-based pump-house with ½ HP electrical pump (1.25" suction & .75" discharge) directly drawing water and pressuring the plumbing system or a gas-engine pump intermittently used to fill an indoor water tank (from which the plumbing is subsequently pressurised).

All water intakes will be equipped with a screen with an appropriate mesh size to ensure no entrapment of fish as per DFO's *1995 Freshwater Intake End-of-Pipe Fish Screen Guidelines*.

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?
Drinking water will be tested at the beginning of each field season. Samples will be sent to Taiga laboratories in Yellowknife for analysis. Diamonds North will consult with Taiga as to the parameters to be tested.

30. Will drinking water be treated? How?
Using sediment filter and UV treatment. Any other treatment required will be conducted as per instructions from the laboratory.

31. Will water be stored on site?
In the dry tent in a 200 gallon plastic tank for domestic use only.

WASTE TREATMENT AND DISPOSAL

32. Describe the characteristics, quantities, treatment and disposal methods for:

x Camp Sewage (blackwater)

Latrine pits using bacterial reducing agent or chloride of lime. All pits to be over 30 m from water and backfilled when finished.

❹ Greywater

Kitchen and dry greywater will be gravity fed or pumped to a natural depression or a properly constructed sump.

x Solid Waste

Burnable solid waste will be burnt in a vented base fuel fed burning barrel, the ashes will be barreled and transported to an approved disposal site in Kugaaruk or Yellowknife.

❹ Bulky Items/Scrap Metal

All non-burnable garbage or debris will be stockpiled at camp and flown to an approved disposal facility located in Yellowknife or Kugaaruk.

❹ Waste Oil/Hazardous Waste

All waste oil and hazardous wastes will be collected and properly stored at camp until such time that it can be transported to an approved disposal/recycling site in Yellowknife or Churchill.

x Empty Barrels/Fuel Drums

Empty barrels and fuel drums will be returned to the fuel supplier to be recycled or they will be transported to an approved disposal facility.

☐ Other:

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33. Please describe incineration system if used on site. What types of wastes will be incinerated?

Burnable solid waste (food, cardboard, etc.) will be burnt in a vented base fuel fed burning barrel, the ashes will be barreled and transported to an approved disposal site in Kugaaruk or Yellowknife.

34. Where and how will non-combustible waste be disposed of? If in a municipality in Nunavut, has authorization been granted?

Currently waste of this nature has been disposed of in Yellowknife by backhauling on any of the charter aircraft Diamonds North has hired.

35. Describe location (relative to water bodies and camp facilities) dimensions and volume, and freeboard for all sumps (if applicable).

Sumps preferably in natural cistern or excavation. Volume to be capable of retaining all turbid drill fluids not recycled. Camp sumps to be close to kitchen and ablution tents to allow gravity drainage to them but greater than 30 meters from water bodies.

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?

Visual monitoring for leachate is done as a matter of course by drillers and camp managers, with ensuing mitigation if detected. No sampling will be done at this early stage of exploration except in cases where septic leachate is suspected.

OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?

The methods proposed have been extensively and successfully used over a number of years in NWT and Nunavut. They are standard to diamond drill exploration and the camps that support it.

ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.

Diamonds North maintains a progressive reclamation policy which effectively restores, as near as possible, any disturbance at any site to its original state before operations begin at the next site. This includes the removal of all garbage, fuel drums and equipment. All constructed sumps will also be backfilled. Before and after pictures of each site will be taken and made available for the public record.

All incinerator residual, non-combustible garbage and empty drums will be backhauled to Kugaaruk or Yellowknife where they will be disposed of in an approved facility.

Diamonds North's Restoration Procedures are described in detail in the attached A & R Plan.

BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.

- **x** Physical Environment (Landscape and Terrain, Air, Water, etc.)
- **x** Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic Organisms, etc.)
- **x** Socio-Economic Environment (Archaeology, Land and Resources Use,
- ☐ Demographics, Social and Culture Patterns, etc.)
- ☐ Other: _____

Aspects of the physical and biological environment will be documented as a portion of the surface mapping and prospecting exercises carried out as part of the program. Wildlife sightings and movements will be documented by ground crews and pilots.

Any archaeological sites encountered will not be disturbed. If a site is found during operations, work in that vicinity will stop, a 30 metre buffer around the area will be established, the site will be photographed and GPS coordinates will be recorded. This information will then be reported to the Prince of Wales Northern Heritage Centre.

Water tests of lakes upon which ice based drilling will occur will be collected and provided to the NWB in the Annual Report.

REGULATORY INFORMATION

40. At a minimum, you should ensure you have a copy of and consult the documents below for compliance with existing regulatory requirements:

- ✓ ARTICLE 13 – *NCLA -Nunavut Land Claims Agreement*
- ✓ NWNSRTA – *The Nunavut Waters and Nunavut Surface Rights Tribunal Act, 2002*
- ✓ *Northwest Territories Waters Regulations, 1993*
- ✓ NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- ✓ NWB - Interim Rules of Practice and Procedure for Public Hearings
- ✓ RWED – *Environmental Protection Act, R-068-93- Spill Contingency Planning and Reporting Regulations, 1993*
- ✓ RWED A Guide to the Spill Contingency Planning and Reporting Regulations, 2002
- ✓ NWTWB - Guidelines for Contingency Planning
- ✓ *Canadian Environmental Protection Act, 1999 (CEPA)*
- ✓ *Fisheries Act, RS 1985* - s.34, 35, 36 and 37
- ✓ DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- ✓ NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- ✓ Canadian Council for Ministers of the Environment (CCME); Canadian Drinking Water Quality Guidelines, 1987
- ✓ Public Health Act - Camp Sanitation Regulations
- ✓ Public Health Act - Water Supply Regulations
- ✓ *Territorial Lands Act* and *Territorial Land Use Regulations*; Updated 2000