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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: Dr. Gordon Osinski **Licence No:** _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: _____ Tel: _____ Fax: _____ E-mail: _____

2. Project Manager: Gordon Osinski Tel: (519) 661-4208 Fax: (519) 661-3198
E-mail: gosinski@uwo.ca

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

- [x] One year or less — Start and completion dates: July 16-31, 2013
- [ ] Multi Year:

If Multi-Year indicate proposed schedule of on site activities
Start: _____ Completion: _____

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 maximum population of the camp is 10 people which will occur from July 16-24. The camp will then accommodate 6 people from July 24-31. The camp will be designed to accommodate 10 people.

8. Provide history of the site if it has been used in the past.
The proposed camp site has been used for temporary camps in previous years.

CAMP LOCATION

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

The camp is located in the Haughton River Valley, approximately 500 m from the Haughton River and approximately 2 km from "Sapphire Lake".

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.

The camp was selected for its proximity to fresh water and geological formations of interest. It has been used previously by the Geological Survey of Canada (1980s) and the NASA Haughton Mars project (1998-1999). See attached map, operations_map_small.jpg.

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

☐	Crown Lands	Permit Number (s)/Expiry Date: _____
☐	Commissioners Lands	Permit Number (s)/Expiry Date: _____
☒	Inuit Owned Lands	Permit Number (s)/Expiry Date: Application submitted.

12. Closest Communities (direction and distance in km):

Grise Fiord is approximately 250 km to the NW of the camp. Resolute Bay is approximately 150 km to the SW of the camp.

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

The ex-mayor of Grise Fiord was contacted in 2010 by a member of the research team.

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

PURPOSE OF THE CAMP

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

16. Activities (check all applicable)

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

☐ Other: _____

17. Type of deposit (exploration focus):

☐ Lead Zinc
☐ Diamond
☐ Gold
☐ Uranium
☐ Other: Impact generated rocks

DRILLING INFORMATION

18. Drilling Activities

☒ Land Based drilling
☐ Drilling on ice

19. Describe what will be done with drill cuttings?

Drill cuttings will be decanted from the drilling water using a sheet of plastic laid into a depression dug around the drill site. Once they are separated from the water returned into the drill hole.

20. Describe what will be done with drill water?

Drill water will be pumped from the river to a reservoir, then from the reservoir to the drilling tubes. As much water as possible will be recovered during drilling using a sheet of plastic laid in a depression dug into the soil around the drill site. The water recovered will be decanted to separate the drill cuttings and pumped back into the reservoir to be reused. Upon completion of the drilling, the water will be decanted and returned to the river.

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.

No additives will be used, water only.

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

No

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.

See attached document: Osinski-Spill Contingency Plan.pdf

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

2 spill kits will be located on site, one at the location of fuel storage, the second in the kitchen tent.

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

Two 55 gallon drums of Mogas will be stored on rubber mats to contain any spills, on flat ground at least 200 m from the main camp site and at least 200 m from any water source.
10 Litres of motor oil will also be stored on rubber mats to contain any spills, on flat ground, in the same location as the gasoline drums.
One 20 lb. propane tank will be stored outside, near the main camp while another will be used in the kitchen tent for cooking.

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

Water will be gathered at the Haughton River which is located approximately 500 m to the west of the main camp.

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

- [x] Domestic Use: 0.05 m^3/day Water Source: Haughton River
- [x] Drilling: 0.05 m^3/day Water Source: Haughton River
- [ ] 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:

Domestic Use water will be collected manually using jugs. Water for drilling will be collected using a pump to fill a reservoir tank. The end of the pipe which is placed in the river will be held at least 12" from the bottom of the river and be equipped with a mesh screen having perforations no larger than 2.5 mm.

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

Drinking water from this site is known to be pristine.

30. Will drinking water be treated? How?

None required.

31. Will water be stored on site?

Approximately 5 gallons of water will be stored on site for drinking and domestic purposes.

WASTE TREATMENT AND DISPOSAL

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

☒ Camp Sewage (blackwater)

Flown out.

☒ Camp Greywater

Sump.

☒ Solid Waste

Combustible waste will be burned in a can, while non-combustible waste will be flown out.

☐ Bulky Items/Scrap Metal

☐ Waste Oil/Hazardous Waste

☒ Empty Barrels/Fuel Drums

Flown out.

☐ Other:

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

A large empty barrel will be used to incinerate paper products and compostables.

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

Non-combustible waste will be flown out to the Polar Continental Shelf Program facility in Resolute Bay.

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

A small sump (50 cm diameter, 50 cm deep) will be located close to the camp, approximately 500 m from the Haughton River.

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

No.

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?

Yes.

ABANDONMENT AND RESTORATION

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

All equipment, supplies and waste will be removed from the site at the conclusion of operations. The sump will be backfilled and the land restored to its original state.

BASELINE DATA

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

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

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