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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: **Indian and Northern Affairs Canada** **Licence No:** _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: **Brad Thompson** Tel: **(780) 497-3862** Fax: **(780) 497-3842**
E-mail: **Brad.Thompson@pwgsc.gc.ca**

2. Project Manager: **Lou Spagnuolo** Tel: **(867) 975-4578** Fax**: (867)975-4736** E-mail**:**
spagnuolol@inac-ainc.gc.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)? **No**
If so, please provide letter of authorization.

5. Duration of the Project
   - ☐ One year or less Start and completion dates: _____
   - ☑ Multi Year:

   If Multi-Year indicate proposed schedule of on site activities
   Start: **May 1, 2008** Completion: **September 15, 2011**

CAMP CLASSIFICATION

6. Type of Camp
   - ☐ Mobile (self-propelled)
   - ☐ Temporary
   - ☑ Seasonally Occupied: **June 15 to September 15**
   - ☐ Permanent
   - ☐ Other:_____

7. What is the design, maximum and expected average population of the camp?

The contractor will mobilize the camp in the winter of 2008/09 and demobilize in the winter of 2010/11. The camp will be occupied from June 15 to September 15 (maximum ~90 days per year). The expected average population of the camp is 35 people (maximum of 50).

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

See attached Executive Summary in English and Inuktitut (Appendix A)

CAMP LOCATION

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

CAM-D is located near the middle of Boothia Peninsula, 4.5 km south of Simpson Lake at a latitude of 68°35' N and a longitude of 91°57 W, see attached Site Maps (Appendix C). CAM-D is approximately half way between Shepherd Bay and Pelly Bay, 120 km southeast of Taloyoak (Spence Bay) and 80km west of the community of Kugaaruk. The main station buildings are located in the Ross Hills at an elevation of 370 m. The terrain is composed of rolling grassy hills cut by rock outcrops.

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 will be sited directly adjacent to the existing buildings in areas that have been previously disturbed. Existing buildings will not be used as camp facilities as they may contain contaminants and are not suitable for occupation during the project. Exact location of the camp will be determined upon awarding of project contract (see Appendix K).

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

- ☑ Crown Lands Permit Number (s)/Expiry Date: **INAC Land Use Permit application has been submitted concurrently with this application**
- ☐ Commissioners Lands Permit Number (s)/Expiry Date: **n/a**
- ☑ Inuit Owned Lands Permit Number (s)/Expiry Date: **application for access to Inuit Owned Lands for the winter cat train route to/from CAM-D has been submitted concurrently with this application**

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

The CAM-D Intermediate DEW Line site is approximately 120 km southeast of Taloyoak and 80 km west of Kugaaruk, see attached Site Maps (Appendix C).

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

Community consultations, with the Hamlet Council, Hunters and Trappers Organization and community residents were completed in April 2006 in Kugaaruk, Taloyoak, and Gjoa Haven. The results of the assessment and the various remediation options being considered for the site were presented. These meetings were used to solicit input as to the community's preferred remedial option. Please see attached public consultation records appended to the CAM-D Remedial Action Plan (Appendix B) for additional details.

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?

The project is not expected to have negative impacts on traditional water use areas or local fish and wildlife habitats. See attached Environmental Screening of the Remediation Program for the Simpson Lake Site (Appendix E).

PURPOSE OF THE CAMP

15.
- ☐ Mining (includes exploration drilling)
- ☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.) (Omit questions # 16 to 21)
- ☑ Other **Site Remediation (Omit questions #16 to 22)**

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: _____

DRILLING INFORMATION

18. Drilling Activities

- ☐ Land Based drilling
- ☐ Drilling on ice

19. Describe what will be done with drill cuttings?

20. Describe what will be done with drill water?

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.

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

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 Preliminary Spill Contingency Plan (Appendix G). The Contractor will be responsible for providing a more detailed spill contingency plan following contract award and prior to mobilization to site (see Appendix K).

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

See attached Preliminary Spill Contingency Plan (Appendix G). The Contractor will be responsible for providing a more detailed spill contingency plan following the contract award and prior to mobilization to site (see Appendix K).

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

Handling, storage and use of flammable liquids will be governed by the current National Fire Code of Canada. Flammable liquids such as gasoline, kerosene and naphtha will be kept for ready use in quantities not exceeding 45 litres, provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Contractor will comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding employee training, use, handling, storage and disposal of hazardous materials, and regarding labelling and provision of Material Safety Data Sheets (MSDS) as required by WHMIS legislation. Upon award of contract and prior to mobilization, the Contractor will provide types, quantities, and method of storage for all fuel and chemicals on site (Appendix K).

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

Potential water sources are the Freshwater Lake approximately 750 m south of the airstrip area and Simpson Lake located 4.7 km northeast of the airstrip area.

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

- ☑ Domestic Use: **20** Water Source: **Freshwater or Simpson Lake**
- ☐ Drilling: _____ Water Source: _____
- ☐ 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:

Water will be pumped to site via a small horsepower pump and overland water intake pipe and equipped with a small mesh screen. The pump will be placed at least 30 m from any water body and a spill kit will be sited near the pump.

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

Commercially bottled water that meets Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) will be used as drinking water until it is demonstrated that the local source meets the Health Canada GCDWQ. Water will be sampled at the water supply sources and at the distribution source and submitted for laboratory analysis. Prior to consumption, at least two consecutive sets of analytical test results will demonstrate that the water source meets the Health Canada GCDWQ. Water will be sampled and analyzed weekly as long as the camp is operational.

30. Will drinking water be treated? How?

If on-site water in its current state does not meet Health Canada GCDWQ, it will be treated to meet the Health Canada GCDWQ. The contractor will determine the appropriate equipment, supplies and materials required to treat the water in accordance with the Health Canada GCDWQ. This information will be forwarded after contract award and prior to mobilization (see Appendix K).

31. Will water be stored on site?

Following award of contract, the Contractor will determine the method of water storage on site. This information will be forwarded after contract award and prior to mobilization (see Appendix K).

WASTE TREATMENT AND DISPOSAL

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

☑ Camp Sewage (blackwater)

Two independently operated temporary lagoons will be installed. Each lagoon will have an individual capacity for 45 days of wastewater storage or one half of the duration of the construction season, whichever is more. Maximum fluid depth will not exceed one metre. The location of the lagoons will be a minimum of 100 m from the construction camp or other temporary facilities and drainage paths, a minimum of 450 m from water bodies supporting aquatic life and downwind of the construction camp (based on the prevailing wind direction). Discharge criteria will be as follows: 1) oil and grease – none visible, 2) pH – 6 to 9, 3) TSS – 180 mg/L, 4) BOD – 120 mg/L, 5) fecal coliforms – 100,000 CFU/100 ml.

☑ Camp Greywater

The camp greywater will consist primarily of wastewater generated from the kitchen and bathroom sinks and showers. The estimated flow from this wastewater stream is 75 L/day per person. This waste will be directed to the sewage lagoons mentioned above (same disposal location as camp sewage).

☑ Solid Waste

Non-hazardous, combustible solid waste will be incinerated on-site in an enclosed container. Non-combustible solid waste generated from the camp operations will be stored in a secure waste disposal bin. The contents of the waste disposal bin will be transported and disposed of in the on-site non-hazardous waste landfill on an as required basis.

☑ Bulky Items/Scrap Metal

Any bulky items or scrap metal waste at the site will be disposed of in one of the on-site non hazardous waste landfill.

☑ Waste Oil/Hazardous Waste

Waste oil and/or hazardous waste generated at the site will either be incinerated on-site (eg. some fuels) or removed from the site and disposed of at the appropriate off-site licensed hazardous material treatment/disposal facility. The hazardous materials will be removed by Cat train and sea lift in accordance with the Transportation of Dangerous Goods Act.

☑ Empty Barrels/Fuel Drums

Barrel contents comprising water only (less than 2% glycols or alcohols) shall be transferred to an open vessel such as a utility tub or half-barrel and any organic material removed by agitation with a pillow or segment of oil absorbent material. The water may then be discarded onto ground that is a minimum of 30 m distant from natural drainage courses. Used oil absorbent material shall be treated as described in the following sections.

Barrel contents, which are comprised of water with glycols and/or alcohols or organic phases, and which contain less than 2 mg/L PCBs, 100 mg/L chlorine, 2 mg/L cadmium, 10 mg/L chromium, and 100 mg/L lead, will be disposed of by on-site incineration (alternatively, these contents may be disposed of off-site at a licensed facility). The solid residual material resulting from incineration will be subjected to a leachate extraction test. Material found to be nonleachate toxic shall be disposed of as contaminated soil. Leachate toxic material will be treated as hazardous waste and disposed of off-site at a licensed disposal facility.

Barrel contents, which contain greater than 2 mg/L PCBs, 1,000 mg/L chlorine, 2 mg/L cadmium, 10 mg/L chromium or 100 mg/L lead will be disposed of off-site at a licensed disposal facility. Used oil absorbent material will be treated as hazardous waste and disposed of off-site at a licensed disposal facility. If it is shown to be uncontaminated with PCBs (<2 mg/L), chlorine (<1,000 mg/L), cadmium (<2 mg/L), chromium (<10 mg/L), and lead (<100 mg/L), it may be incinerated on-site.

Empty barrels will be crushed or shredded and landfilled as non-hazardous waste after they have been cleaned in an appropriate manner. The barrels shall be crushed in such a manner so as to reduce their volume by a minimum of 80%. Shredded barrels may be disposed of in the non hazardous waste landfill or off-site as recycled metals.

☐ Other: **Not applicable.**

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

The types of waste that will be incinerated at the site consist primarily of domestic solid waste including food, paper and unpainted wood waste. Upon award of contract, the Contractor will identify the incineration system to be used on-site. The details regarding this incineration system will be provided for approval prior to mobilization (see Appendix K).

The contents of all unsealed barrels with incomplete or inadequate labelling (ie: barrels with unknown contents) will be sampled and submitted for laboratory analysis prior to their classification as either waste that can be incinerated on-site or hazardous waste that must be transported off-site for disposal at an approved facility.

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

Non-combustible solid waste generated from the camp operations will be stored in a secure waste disposal bin. The contents of the waste disposal bin will be transported and disposed of in the on-site non hazardous waste (NHW) landfills on an as required basis.

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

This information and information supplementing the discussion of water bodies and camp facilities in Section 32 will be provided as it becomes available (see Appendix K).

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

Groundwater monitoring wells will be installed around the perimeter of the landfill to facilitate long term leachate monitoring. Monitoring will occur at least annually for the first five years and periodically thereafter for a total of 25 years. The monitoring requirements of the landfill will be reassessed at that time. For further details on the long term monitoring see the CAM-D Remedial Action Plan (Appendix B).

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 contract specifications will require the Contractor to utilize water supply and waste treatment and disposal methods that have been used and proven effective in cold climates. All on-site activities are scheduled for the summer field season when the average daily temperature is above freezing. The water and wastewater systems are basic so it is unlikely that any O&M problems will occur as a result of the climate. These systems will meet all federal guidelines. Further information will be provided as it becomes available (see Appendix K).

The Contractor will be responsible for identifying potential O & M problems that may occur and ensuring contingency plans are in place to deal with them. The Contractor will provide a Health and Safety Plan and Onsite Contingency Emergency Response Plan.

ABANDONMENT AND RESTORATION

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

The camp will be decommissioned and all equipment removed from the site during the winter of 2010/11. Restoration of the site will be in accordance with the CAM-D Remedial Action Plan (Appendix B).

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: _____

Bibliography: (not submitted with this application)

1. ESG, 1995 - Environmental Study of Abandoned of DEW Line Sites: One Auxiliary and Eight Intermediate Sites in the Canadian Arctic.

2. Kitikemot Corporation, 2001 - CAM-D (Simpson Lake) DEW Line Site Remediation Engineering Design and Cost Estimate

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