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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

# EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

**Applicant:** *North Warning System Office* **Licence No:** _____
(For NWB Use Only)

## ADMINISTRATIVE INFORMATION

1. Environment Manager: *Mr. Kim Kalen, R&CS 3-4-3C* Tel: *(613)998-8482* Fax: *(613) 998-9261*
   E-mail : *Kalen.KE@forces.gc.ca*

2. Project Manager: *Maj. A. Cameron, R&CS 3-4* Tel: *(613) 998-8602* Fax: *(613) 998-9261*
   E-mail: *Cameron.AD@forces.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)? If so, please provide letter of authorization.
   *Not applicable*
5. Duration of the Project
   [ ] Annual
   [ **X** ] Multi Year:
   If Multi-Year indicate proposed schedule of on site activities
   Start: *1950's* Completion: *TBD*

## CAMP CLASSIFICATION

6. Type of Camp
   [ ] Mobile (self-propelled)
   [ ] Temporary
   [ ] Seasonally Occupied:
   [ ] Permanent
   [ **X** ] Other: *National Defence Long Range Radar Station*

7. What are the design population of the camp and the maximum population expected on site at one time? What will be the fluctuations in personnel?
   *The premise is unmanned all year round. There are four (4) scheduled maintenance trips to the station every year. Each of these trip comprises a 4-peron crew for a duration of 4 days. Major maintenance projects resulting in a higher occupancy rate at the station may occur once every 2-3 years. Unplanned corrective maintenance trips to the station during the year may be required from time to time. However, these trips rarely include overnight stay at the station.*

8. Provide history of the site if it has been used in the past.
   *From 1989 through 1995, the station was fully manned with an average occupancy of 15 persons all year round.*

*Since 1995, the station has been an unmanned facility.*

## CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.
*Please refer to FOX-3 Site Plan (Serial H-D67-/2-8400-101), (Serial H-D67/2-8400-102) & (Serial H-D67/2-8400-103) in Annex B*
*Please refer to FOX-3 Site Description in Annex A*

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.

*Based on the National Prime Mission requirements.*

11. Is the camp or any aspect of the project located on:
[ **X** ] Crown Lands Permit Number (s)/Expiry Date: ____*Not applicable*
[ ] Commissioners Lands Permit Number (s)/Expiry Date: _____
[ ] Inuit Owned Lands Permit Number (s)/Expiry Date: _____

12. Closest Communities (distance in km):

*350 Km west of Broughton Island, Nunavut.*

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

*Not applicable*

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
○ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.)
(Omit questions # 16 to 21)
⊗Other ___*National Prime Mission*_____ (Omit questions # 16 to 22)

16. ○ 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:
    - ○ 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. Does the proponent have a spill contingency plan in place? Please include for review.

*The North Warning System/Nasittuq Spill Contingency Plan is attached as Annex C.*

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

*2 groups of spill kits are available on site; namely fuel spill kit and chemical spill kit.*
*Please refer to the spill kit storage location(FOX-3) site plans (Serial H-D67/2-8400-104 & Serial H-D67/2-8400-105)in Annex D .*

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

| Type | Quantity | Storage method | MSDS |
|---|---|---|---|
| *Jet A-1* | *883,788 liters* | *Above-ground storage tank* | *See Annex E* |

## WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

*See FOX-3 Site plans (Serial H-D67/2-8400-101 & Serial H-D67/2-8400-102) in Annex B*

27. Estimated demand (in L/day * person):

- ○ Domestic Use: 16,000 liters /year Water Source: *water lake*
- ○ Drilling Units: _____ 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? Describe:

*Water is trucked from the water lake (see Box 26) to the summit once annually during summer. The water intake hose is equipped with a mesh screen.*

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

*Drinking water quality is monitored. Parameters tested are based on the Canadian Drinking Water Criteria and is listed as follows:*
*Physical and Chemical Parameters:*

| | | |
|---|---|---|
| *Alkalinity* | *Hardness* | *Phenols* |
| *Ammonia* | *Hydrogen sulphide* | *Potassium* |
| *BOD5* | *Iron* | *Sodium* |
| *Calcium* | *Magnesium* | *Sulphate* |
| *Chloride* | *Manganese* | *Tannin and lignin* |
| *Color* | *Nitrate* | *Total Dissolved Solids* |
| *Conductivity* | *Nitrite* | *Total Kjeddahl Nitrogen (TKN)* |
| *Chemical Oxygen Demand* | *PCBs* | *Turbidity* |
| *Fluoride* | *pH* | |

*Bacteriological Parameters*

| | |
|---|---|
| *E. coli* | *Heterotrophic plate (HPC)* |
| *Fecal streptococci* | *Total and Fecal coliform* |

30. Will drinking water be treated? How?
*Drinking water is treated using the following phases.*

| | |
|---|---|
| *Particulates and suspended solids* | *filtration (3μ)* |
| *Bacteria/other water borne microbes* | *UV lamp* |
| *Color and odor* | *Charcoal filter* |

31. Will water be stored on site?
*Yes, water is stored in above ground water storage tanks inside the water storage building.*

## WASTE TREATMENT AND DISPOSAL

32. Describe the characteristics, quantities, treatment and disposal methods for:
*The following data is based on the existing concept of unmanned operations. There are four(4) scheduled Preventive maintenance trips of a 4-person crew staging for four (4) days per trip. An average of 4,000 liters of water is consumed per trip.*

⊗Camp Sewage (blackwater)
*incinolets and occasional use (summer months only) of the existing sewage outfall facility.*

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⊗ Camp Greywater *(e.g., kitchen, showers and washroom sinks)*
*controlled discharge at designated location(s)*

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⊗ Solid Waste
*Burnt in a burn bin and the accumulated ash buried at a designated landfill on site.*

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⊗ Bulky Items/Scrap Metal
*Stockpile and retrograde*

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⊗ Waste Oil/Hazardous Waste
*retrograde to licensed disposal facility*

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⊗ Empty Barrels/Fuel Drums
*Re-used for liquid waste*

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○ Other:

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33. Please describe incineration system if used on site. What types of wastes will be incinerated?
*Not applicable.*

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

35. Describe location (relative to water bodies and camp facilities ) dimensions and volume, and freeboard for sumps (if applicable).
*Not applicable*

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?
*Yes, the proposed outfall area will be monitored. Effluent quality will be assessed based on the Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments. Parameters to be sampled and analysed Will be as follows:*

| | | | |
|---|---|---|---|
| *Ammonia Nitrogen* | *Magnesium* | *sodium* | *Total Arsenic* |
| *BOD5* | *Nitrate-nitrite* | *Total Calcium* | *Total Copper* |
| *Calcium* | *Oil and grease* | *Total Chromium* | *Total Iron* |
| *Conductivity* | *pH* | *Total Lead* | *Total Mercury* |
| *Fecal Coliform* | *Potassium* | *Total Nickel* | *Total Zinc* |

*The above parameters will be sampled and analysed at every preventive maintenance trip during the snow free seasons.*

## 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, the water supply system and similar waste system have been in operation at the station since 1950's.*

## ABANDONMENT AND RESTORATION

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

## 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:

*Reference: Monenco-Eyretechnics Group. October 1987. Initial Environmental Evaluation of the North Warning System Project Eleven long Range Radar Sites and the Short Range Radar Development Site. Volume One*

## REGULATORY INFORMATION

40. Do you have a copy of
- ○ Article 13 - Nunavut Land Claims Agreement
- ○ NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- ○ NWB - Interim Rules of Practice and Procedure for Public Hearings
- ○ NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- ○ NWTWB - Guidelines for Contingency Planning
- ○ DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- ○ Fisheries Act - s.35
- ○ RWED - Environment Protection- Spill Contingency Regulations
- ○ Canadian Drinking Water Quality Guidelines
- ○ Public Health Act Camp Sanitation Regulations

- Public Health Act Water Supply Regulations
- Territorial Land Use Act and Regulations

You should consult the above document, guidelines, and legislation for compliance with existing regulatory requirements.