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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP
SUPPLEMENTARY QUESTIONNAIRE

REVISED

Applicant: Nanisivik Naval Facility, Department of National Defence

Licence No: _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: **Robert Bellizzi** Tel:**613-949-6908** Fax: **613-949-6926** E-mail: **robert.bellizzi@dcc-cdc.gc.ca**

2. Project Manager: **Rodney Watson** Tel: **613-945-7720** E-mail**: Rodney.watson@forces.gc.ca**

3. Does the applicant hold the necessary property rights? **Yes; this land is Federal Crown Land, administered by Department of Fisheries and Oceans (DFO). Currently there are negotiations under way to transfer the administration of the property to the Department of National Defence (DND); the Government of Canada will remain the owner of the land.**

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

   Work Camp
   Start: January 2010 **Completion: January 2012**

   Naval Facility, initial operational capability
   Start: Post January 2012 **Completion: January 2015**

   Naval Facility, full operational capability
   Start: January 2015 **Estimated earliest re-capitalization of infrastructure: 2055**

CAMP CLASSIFICATION

6. Type of Camp
   - ☐ Mobile (self-propelled)
   - ✓ **Temporary**
   - ☐ Seasonally Occupied
   - ☐ Permanent
   - ☐ Other:_____

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

The design and maximum expected number of workers at the work camp is approximately 60 people. There will be 60 people during the construction phase for approximately 270 days over a 3 year period.

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

The site of the proposed Nanisivik Naval Facility is currently administered by the Department of Fisheries and Oceans Canada. The infrastructure at the Nanisivik port site was initially constructed by private industry between 1974 and 1976 to support the shipping of zinc and lead mineral concentrates. Although built by the mining company, the existing berthing facility is owned by the Department of Fisheries and Oceans. It has been utilized by the Canadian Coast Guard, commercial tankers, cargo vessels and cruise ships for many years. Canadian Coast Guard ceased refueling activity at this site as of 2008.

The historical events leading to the current project proposal began in 1978 when 30.36 acres (.13 square kilometers) was leased to industry by the federal government (Ministry of Transport from1978-1998, and Department of Fisheries and Oceans from 1998-2003). Zinc and lead mineral concentrates were produced at the mill and hauled to the concentrate storage shed at the port facilities. A former proponent that used the facilities constructed a tank farm to store diesel fuel and gasoline for use in mining activities and home heating. This lease expired on 31 December 2003 and mining activities in the vicinity ceased.

At present the mining company has closed its operations and is undertaking remediation and decommissioning responsibilities at the port site, village and mine sites. Remediation work is scheduled to be complete in 2009.

CAMP LOCATION

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

Upon initial analysis of the project site, and given limited information at this point in the project design, it is assumed that the camp site will be located within the administrative boundaries delineating current DFO land. It is an area of land relatively flat that can provide ample space for all shelters and buildings required for the work camp. The approximate location of the work camp is the same as the project site: 73°N, 84°W. The work camp shelters will be built to accommodate approximately 60 people.

The proposed project is located on Federal Crown land located on Strathcona Sound, at approximate latitude 73°N and longitude 84°W, on the northern tip of Baffin Island. It is currently administered by the Department of Fisheries and Oceans. It is composed of a land lot and a water lot, totaling approximately 108 acres (approximately .44 square kilometers). It is located on the south shore of Strathcona Sound, 25km from the community of Arctic Bay. It is linked to this community through a 33km "all weather" road, characterized as a dirt road and kept opened and cleared all year round. The topography at the Nanisivik Port site is relatively flat with a slight change in elevation along the shoreline or in close proximity to the shoreline. The port site lies at the foot of a wide valley that features a notable rise composed of sedimentary cliffs and bluffs leading to a rough plateau to the east and west approximately 640 meters above sea level.

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.

Please see above description for the rationale for the work camp site selection.

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: **n/a**
☐	Inuit Owned Lands	Permit Number (s)/Expiry Date:

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

Arctic Bay is located approximately 25 km south west of the site, across the Borden Peninsula.

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

Members of the Nanisivik Naval Facility project team conducted a site visit of Nanisivik in May 2006. At the same time, they conducted a visit of towns and organizations in Nunavut. During their visit, the project director, project managers, and the logistics coordinator met with various organizations in Nunavut. The project team held information sessions in Iqaluit in May 2008 and in Cambridge Bay in July 2008. Interested parties included representatives from INAC, DFO, QIA, the Nunavut territory government, NIRB and NTI. In October 2008, the project manager and assistant met with officials from the hamlet of Arctic Bay, which included the mayor, the senior administrative officer, councilors, the Hunters and Trappers Association, the Community and Land Resources Committee and the MLA for the area. The members of the Nanisivik Naval Facility project provided an overview of the project, with a detailed multi-media presentation of the proposed infrastructure and activities at the site. There were many questions asked about the proposed project and clarifications were made during these encounters.

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.

PURPOSE OF THE CAMP

15.
- ☐ Mining (includes exploration drilling)
- ☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.) (Omit questions # 16 to 21)
- ☑ Other **Naval Facility for the re-fueling capability of Arctic Off-shore Patrol Ships belonging to the Government of Canada, and for re-fueling capability of Canadian Coast Guard ships.**

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: **Re-fueling capability**

17. Type of deposit (exploration focus): **N/A**

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

DRILLING INFORMATION N/A

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.

A Spill Contingency Plan will be developed by the architecture and engineering (A&E) consultants that will be contracted to design the Nanisivik Naval Facility. Specifications of the spill contingency plan will be in accordance with the stated laws, regulations and standards.

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

The spill contingency plan will identify the number of spill kits on site and their location. It will be provided to the NWB once it is designed by the A&E consultants.

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

Construction Phase (estimated amounts are based on 9-months of construction over a 3-year period)

Fuel	Number of Containers and Capacity of Containers (in Litres)	Total Amount of Fuel (in Litres)	Proposed Storage Methods
Diesel for construction power and heating	**1 x 300,000**	**300,000**	Bulk fuel storage tank
Gasoline	**8 x 160**	**1,280**	Barrel
Aviation fuel (JP4/JP5)	**25 x 160**	**4,000**	Barrel

Fuel will be stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Nanisivik Naval Facility personnel 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.

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

Construction Phase (estimated at 60 person camp, to be determined)

Daily amount (m^3)	Proposed water retrieval methods	Proposed water retrieval location
Potable water requirements: 11.4 m^3 Waste water requirements:	**Using a water truck and pump. Water storage will be located at the camp site.**	**Water will be drawn from Twin Lake.**

27. Estimated water use (in cubic metres/day): **11.4 m^3**

☑ Domestic Use: **Potable water** Water Source: **Twin Lake (please see above table)**
☐ Drilling: _____ Water Source: _____
☑ Other: **Construction** Water Source: **Twin Lake (please see above table) and/or Twin Lake creek for construction water.**

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 transferred to the site via a truck and pump. The water intake pipe equipped with a small mesh screen to remove any debris that may be present in the water, and to prevent any fish from being trapped.

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

Drinking water drawn from the stream will be tested for quality, including standard bacterial health quality. This has been the practice in previous years at the site. We propose to use the same source of water that has been used for over 20 years at the site.

30. Will drinking water be treated? How?

Yes, exact treatment will be determined, but will most likely include a particulate screen, carbon filter, and UV treatment.

31. Will water be stored on site?

Water will be stored on site using a storage tank that will be fed by a water truck and pump, large enough to sustain 60 people during the construction phase of the project. Domestic water will be drawn form the water tank for use at the camp using electric generator pumps.

WASTE TREATMENT AND DISPOSAL

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

Construction Phase (Sewage and greywater amounts are based on an average estimate of 190-L of water used per person per day; based on 60 persons over a 270-day (9-month) period)

Type of waste	Projected amount generated	Method of Disposal	Additional treatment procedures
Sewage (black-water, greywater and human waste)	**11.4m3**	Sewage waste treatment plant, and lagoon	Sludge will be disposed off site.
Combustible wastes	**120m3**	Incinerator removal off site	Residue from incinerator will be transported off site
Non-Combustible wastes	**30m3**	Off-site	
Overburden (organic soil, waste material, tailings)	**N/A**	N/A	
Hazardous waste	**1.2 m3**	Off-site	
Contaminated Soils	**N/A**	N/A	It is expected that all contaminated soils will be rehabilitated.

33. 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. It is estimated that the contents of the waste disposal bin will be transported by vessel to off-site facilities.

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

Not applicable.

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

As a minimum, the camp sewage will be directed to a combination of treatment plant and lagoon situated at approximately 100 metres from the camp. This lagoon shall be located at least 100 metres from any natural drainage course and water bodies that support aquatic life. The sewage

lagoons will be sized to provide an individual capacity for approximately one half of the duration of the construction season. The maximum fluid depth shall not exceed one metre. The sewage effluent will be tested prior to discharge for the following parameters: Biological Oxygen Demand, Total Suspended Solids, Oil & Grease; Faecal Coliforms and pH. Greywater from camp operations will also be discharged into the sewage lagoon. Domestic garbage will be incinerated in an enclosed container (we assume this will typically be a forced-air incinerator) and the residual waste buried in a Non-Hazardous Waste Landfill, or transported to off-site facilities. Any hazardous wastes encountered during the construction and operationof the Nanisivik Naval Facility will be packaged and stored according to Transport of Dangerous Goods Regulations prior to shipment to a southern disposal facility. Waste oil, in this case, is included as hazardous waste and will be treated as such in the waste manaegemnt plan.

OPERATION AND MAINTENANCE

36. 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?

Water supply and waste disposal methods have been used by industry in the past at this site, and have proven to work in these cold climates.

ABANDONMENT AND RESTORATION

37. Provide a detailed description of progressive and final abandonment and restoration activities at the site.
Decommissioning of the work camp for the Nanisivik Naval Facility will occur in approximately 2012. The work camp, located on federally owned and administered land, including the temporary shelters, may be transported back to the appropriate originating facilities outside of Nunavut upon decommissioning.

BASELINE DATA

38. 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: _____

Bibliographic reference:
All documents are produced for and by DND or DFO.

- **Phase I, II, III Environmental Site Assessments (Phase III: 2009)**
- **Geotechnical Reports (summer 2009);**
- **Environmental Baseline Reports (2009);**
- **Archaeological Assessment report (Fall 2008);**
- **Nanisivik Wharf site inspection and condition report 2009);**
- **Detailed Topographic Survey of the Nanisivik Naval Facility proposed site (2009);**
- **Fuel Tank Inspection (2009).**

REGULATORY INFORMATION

39. 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