NASITTUQ®

An ATCO Frontec and Pan Arctic Inuit Company

Serial No. 2078-CNC

23 September 2008

Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut
X0B 1J0

Attention: Ms. Phyllis Beaulieu

Subject: Application for New Water Licence – Cambridge Bay

References: A. Licence NWB6CAM0409 – Type "B", Cambridge Bay ("CAM-M"), Nunavut;
B. Letter from NWB dated 26 August 2008.

Dear Ms. Beaulieu:

Please find attached the following items in support of Nasittuq's application for a new Water Licence for Cambridge Bay ("CAM-M"):

- completed Water Licence Application Form for Cambridge Bay ("CAM-M") (Attachment 1);
- completed Exploration/Remote Camp Supplementary Questionnaire (Attachment 2);
- Inuktitut and English Summary of Project (Attachment 3);
- cheque for the Application Fee of $30.00 (Attachment 4); and
- cheque for the Water Use Fee of $30.00 (Attachment 5).

Currently there is a licence in place for the CAM-M site under the Department of National Defence's ("DND") name (Reference "A") which expires in 2009. The application for the licence was prepared by Nasittuq; however, in error, we submitted the application with DND as the Licensee instead of Nasittuq. This current application is submitted to correct this oversight, as recommended by the Nunavut Water Board ("NWB") in the Reference "B" letter.

The following highlights some areas of particular interest for this application, which we feel are appropriate for this new licence, or which we have noted while administering the

Nasittuq Corporation, Suite 100, 170 Laurier Avenue W., Ottawa, ON, Canada K1P 5V5
Tel: 613-234-9033 Fax: 613-234-2671
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current licence:

1. **Sewage Handling System and Effluent Sampling Point CDL-2**

The sewage (blackwater) and greywater are both handled by a tertiary wastewater treatment system called Cycle-Let® located in the sewage treatment plant at CAM-M. This system is described in the Exploration/Remote Camp Supplementary Questionnaire. In short, this system treats sewage to the point where the end product is water. After treatment, the system recovers this water for toilets and urinals, with excess discharged to an outfall. The sewage treatment system is monitored by on-site personnel and is maintained by the Original Equipment Manufacturer ("OEM") on a quarterly basis to ensure that it is functioning within specification. The current licence at Reference "A" requires that the effluent be sampled in the months of May through August inclusive, with the parameters to test for also stated in the license. We are requesting that these tests be conducted quarterly throughout the year, as we believe that this will give a better indication that the system as a whole is in fact functioning within specification. Although the effluent is essentially water, we agree that the parameters to be sampled for should be the same as those required by the current license. The location of the system and the sample point CDL-2 are shown on the attached site plan (Annex B to the Exploration/Remote Camp Supplementary Questionnaire).

2. **Raw Water Monitoring Point CDL-1**

As per the attached site plan (Annex B to the Exploration/Remote Camp Supplementary Questionnaire), we wish to confirm that the monitoring point for water intake, CDL-1, is at the raw water storage tank, and not at the water lake itself. The water meter we have installed is inside the building on the raw water fill line. The meter is installed here for ease of reading and maintenance. We trust this is acceptable.

3. **Emergency Response and Spill Reporting**

Nasittuq requests the NWB issues the new licence requiring spill reports based on the minimum reportable quantities of Schedule B of the Spill Contingency Planning and Spill Reporting Regulations as shown on the web site of the Nunavut Department of the Environment. The existing licence calls for the reporting of all spills. Nasittuq's current policy is to have our site staff report all spills internally, regardless of volume, as shown in Nasittuq's Spill Contingency Plan (Annex D to the Exploration/Remote Camp Supplementary Questionnaire). Our Engineering Department uses this information to determine if there are any deficiencies in the Petroleum, Oil & Lubricants (POL) system, e.g. pressure relief valves required or not working, flex hoses which may be weeping indicating they

require replacement, etc. As a result, we have spill reports for as little as 0.1 litres. Upon further review of the Spill Contingency Planning and Spill Reporting Regulations, Nasittuq notes that spills are to be reported as per Schedule B. As an example, the reportable limit for flammable liquids is 100 litres. By following the minimum reportable quantities of Schedule B, Nasittuq will be in compliance to the standards set by the Nunavut Department of the Environment.

Nasittuq has noted as per Section 76 of the Act, when applying for a new water licence, "The Board **may** require an applicant, a licensee or a prospective assignee to furnish and maintain security with the Minister in the form, of the nature, subject to such terms and conditions and in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to the Minister." Nasittuq is the Agent under Contract to Public Works and Government Services Canada ("PWGSC") for the Operation and Maintenance of the North Warning System ("NWS"). This work is performed on DND property for which Nasittuq has care and custody for the duration of the Contract. Nasittuq understands that the NWS will continue to operate at least until 2030. Full ownership and responsibility for final disposition/reclamation of these NWS sites remains with the Department of National Defence.

Nasittuq believes that the North Warning System Contract itself provides the security required by the Board. Specifically, the North Warning System Contract provides security in the form of definitions of liability and subsequent insurance requirements for the Contractor ("Nasittuq") and also provides for Guarantors in the event of "Default of Contract" by the Contractor.

The NWS Contract is very specific in terms of Nasittuq's legal requirements and limitations of liability related to Government Property. Nasittuq is required to maintain insurance policies to cover liabilities for each occurrence (not less than) as follows:

a) One Hundred Million Dollars ($100,000,000) (Environmental) for losses, injuries, damages, expenses, charges and Costs resulting from environmental damages; and
b) Sixty Million Dollars ($60,000,000) (Property) for loss or damages of Government Property.

The Cover Notes are provided to PWGSC on an annual basis for their review and approval. Nasittuq would be pleased to provide them to the Board upon request. Nasittuq believes that such insurance provides the necessary security guarantee required by the Minister in granting the licences.

In the interest of expediting this process, we would like to meet with you in your offices to review this application, to answer any questions you may have at that time, and also clarify any term or condition of the Licence to ensure its effective administration. We will be contacting you shortly to arrange this meeting. In the meantime, if you have any

questions or comments, you can contact Mr. Scott Charland, Senior Manager, Planning & Design at (613) 787-9626, or by email at scott.charland@nasittuq.com.

Yours sincerely,
NASITTUQ CORPORATION

Jacques Plante,
President

cc: Sr. Manager, Planning and Design, Sr. Manager, Contracts and Supply Chain, Sr. Manager, Maintenance, CFO and Contracts

Attachments:

1. Water Licence Application Form for Cambridge Bay ("CAM-M")
2. Exploration/Remote Camp Supplementary Questionnaire
3. Inuktitut and English Summary of Project
4. Cheque for the Application Fee, payable to the Receiver General for Canada, in the amount of $30.00
5. Cheque for the Water Use Fee, payable to the Receiver General for Canada, in the amount of $30.00.

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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

WATER LICENCE
APPLICATION FORM

Application for: (check one)

☒ **New** ☐ **Renewal** ☐ **Amendment** ☐ **Assignment** ☐ **Cancellation**

LICENCE NO:
(for NWB use only)

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

Nasittuq Corporation
Suite 100, 170 Laurier Avenue West
Ottawa, Ontario, K1P 5V5
Attention: Mr. Jacques Plante,
President, Nasittuq Corporation and
Project Director, North Warning System Project

Phone: (613) 234-9033 ext.833
Fax: (613) 234-2671
e-mail: jacques.plante@nasittuq.com

2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)

Same

Phone: _____
Fax: _____
e-mail: _____

3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)

CAM-M is situated in Nunavut on the south shore of Victoria Island in the Arctic Ocean. The site is located on 1627 acres of land along the coastal margin of extensive rolling plateau which rises gently inland from the top of steep cliffs (12 to 24 m high) on the western arm of Cambridge Bay. The closest source of support is the community of Cambridge Bay, 4 kilometers away by road.

See **Annex A** for the CAM-M Site Plan Drawing (Serial H-C25/4-8400-102).

Latitude: (69°06'52''N) Longitude: (105°07'14''W) NTS Map Sheet No. N.A. Scale: N.A.

4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)

CAM-M is a Logistics Support Site (LSS) and Long Range Radar Site (LRR) for the North Warning System (NWS). It is staffed with a site population of 18 to 22 people per day during the year, but numbers swell during the summer due to seasonal construction and occasional large groups of Third Party visitors. The LSS serves as a regular and emergency dispatch centre for the unmanned LRR CAM-3 and for ten (10) Short Range Radar sites (SRRs). It serves as a storage facility for equipment and replacement parts for the sites. In the event of an environmental emergency, CAM-M supplies additional spill response materials to the sites and coordinates local logistics.

CAM-M is one of 11 LRRs of the North Warning System (NWS). The Prime Mission of the radar sites is to gather information about any airborne activity within their coverage area. The LRRs are located across the Yukon, Northwest Territories, Nunavut, and down the Labrador coast. The facilities are remotely monitored and controlled from North Bay on a 24/7 basis. The information they receive is automatically sent to the Canadian Air Defence Sector located at 22 Wing, CFB North Bay over a long-haul satellite communications network.

See **Annex A** for the CAM-M Site Plan Drawing (Serial H-C25/4-8400-102).

5. TYPE OF PRIMARY UNDERTAKING (A supplementary questionnaire **must** be submitted with the application for undertakings listed in **"bold"**)

- ☐ **Industrial**
- ☐ **Mining and Milling**(includes exploration/drilling)
- ☒ **Municipal** (includes camps/lodges)
- ☐ Power
- ☐ Agricultural
- ☐ **Conservation**
- ☐ Recreational
- ☐ **Miscellaneous** (describe below):

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings

6. WATER USE

- ☒ To obtain water
- ☐ To cross a watercourse
- ☐ To modify the bed or bank of a watercourse
- ☐ Other (describe):
- ☐ Flood control
- ☐ To divert a watercourse
- ☐ To alter the flow of , or store, water

7. QUANTITY OF WATER INVOLVED (cubic metres per day including both quantity to be used and quality to be returned to source)

Water use
- ☒ $100m^3$/day or less
- ☐ Greater than $100m^3$/day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.)

Water returned to source:
3.6 to 4.8 m^3/day

Quality returned: Will be analyzed for:
(a) Biochemical Oxygen Demand (BOD), total suspended solids (TSS), fecal coliforms, pH, phenols, and oil & grease for compliance with the *Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments, April 1976;*
(b) total arsenic, total copper, total iron, total mercury, total zinc, sulphate, total cadmium, total chromium, total lead, and total nickel for compliance with the *NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories, 1992;* and
(c) nitrate-nitrite, sodium, magnesium, conductivity, ammonia nitrogen, potassium, and calcium.

8. WASTE (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.)

- ☒ Sewage — Sewage (blackwater) and grey water are both handled by a tertiary wastewater treatment system, Cycle-let, located in the sewage treatment plant. An average of 6 cubic meters per day of sewage and grey water is processed. Of this total, 3.6 to 4.8 cubic meters per day of the treated water is recycled as urinal/toilet flush water and 1.2 to 2.4 cubic meters per day goes to the designated grey water outfall area.
- ☒ Solid Waste — Solid waste is sent to the Cambridge Bay community landfill twice a week. Approximately 1 to 1.4 cubic meters per day of solid waste is generated.
- ☒ Hazardous — Hazardous waste is retrograded to a licensed disposal facility located outside of Nunavut every year.
- ☒ Bulky Items/Scrap Metal — These items are stored on a pallet line and retrograded for disposal outside of Nunavut as required, typically every two to four years.
- ☒ Waste oil — Waste oil is retrograded to a licensed disposal facility located outside of Nunavut every year.
- ☒ Greywater — Sewage (blackwater) and grey water are both handled by a tertiary wastewater treatment system. See "Sewage" description above.
- ☐ Sludges
- ☐ Other describe:

9. OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (give name, mailing address and location; attach if necessary)

Not applicable. Department of National Defence property.

Land Use Permit

DIAND	☐ Yes	☐ No	If no, date expected _____
Regional Inuit Association	☐ Yes	☐ No	If no, date expected _____
Commissioner	☐ Yes	☐ No	If no, date expected _____

10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES (direct, indirect, cumulative impacts, etc.)

Nasittuq Corp., North Warning System (NWS) Project, has maintained an Environmental Management System (EMS) registered to the ISO 14001:2004 EMS standard since 2006. As part of its EMS, Nasittuq completed a systematic review of the activities required to operate and maintain the North Warning System sites and identified those activities which could have an impact on the environment. For each such activity, Nasittuq identified the potential negative environmental impacts and associated preventive and mitigative measures. These measures include implementation of company policies, plans, and procedures; training – both company developed courses and on-the-job training to ensure employees know their responsibilities; and annual audits of site activities to ensure company requirements are followed. As well, Nasittuq continuously reviews legal and other requirements to ensure that activities are conducted in accordance with current acts and regulations.

Nasittuq Corp.'s main environmental document is the Environmental Protection Plan (EPP). The EPP contains Nasittuq's Environmental Policy which states Nasittuq's commitment to environmental stewardship and outlines Nasittuq's contractual requirements with the Department of National Defence and the responsibilities of Nasittuq employees and subcontractors. The EPP states procedures for environmental practices at NWS sites in the following areas: wildlife; heritage resource protection; water supply management and treatment; vehicle movement and maintenance; roads, ground, and helipads; solid waste management; waste water management; hazardous materials management; halocarbon management; waste hazardous materials management; spill contingency plan; and environmental assessments. As well, background information is provided in the form of: NWS site descriptions, legal and other requirements, environmental aspects and impacts, and regional environments and wildlife, including species at risk.

While the regular operation and maintenance (day-to-day) activities of the NWS and the prevention/mitigation of potential environmental impacts are addressed by the EMS and EPP, one-time Additional Work Requirement (AWR) projects undergo an environmental assessment during the design phase to identify the unique impacts and required preventive/mitigative measures to be applied for the duration of the project.

NIRB Screening ☐ Yes ☐ No If no, date expected _____
Not applicable.

11. INUIT WATER RIGHTS

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined?

The project will not substantially affect the quality, quantity, or flow of water through Inuit Owned Lands.

12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)

Nasittuq Corporation
Suite 100, 170 Laurier Avenue West
Ottawa, ON K1P 5V5
(Contractor for the operation and maintenance of the North Warning System)

13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)

Initial Environmental Evaluation of the North Warning System Project Eleven Long Range Radar Sites and the Short Range Radar Development Site, Volume One. Monenco-Eyretechnics Group, October 1987 (attached as **Annex B**).

14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN

Supplementary Questionnaire (where applicable: see section 5) ☒ Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun/English Summary of Project ☒ Yes ☐ No If no, date expected _____

Application fee of $30.00 (Payee Receiver General for Canada) ☒ Yes ☐ No If no, date expected _____

Water Use fee of $30.00 (unless otherwise indicated in Section 9 of the *NWT Waters Regulations;* Payee Receiver General for Canada)

☒ Yes ☐ No If no, date expected ____

15. PROPOSED TIME SCHEDULE (unless otherwise indicated, the NWB will consider the application for a five (5) year term)

☐ one year or less (or) ☒ Multi Year

Start Date: **1950's** Completion Date: **2030**

JACQUES PLANTE	PRESIDENT		23 SEPT. 2008
Name (Print)	**Title (Print)**	**Signature**	**Date**

For Nunavut Water Board office use only

APPLICATION FEE **Amount: $_____** **Pay ID No.: _____**

WATER USE DEPOSIT **Amount: $_____** **Pay ID No.: _____**

Annex A

CAM-M Site Plan Drawing (Serial H-C25/4-8400-102)

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: Nasittuq Corporation **Licence No:** _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: Scott Charland Tel: 613-234-9033 ext. 626 Fax: 613-234-2671
E-mail: scott.charland@nasittuq.com

2. Project Manager: Jacques Plante Tel: 613-234-9033 ext. 833 Fax: 613-234-2671
E-mail: jacques.plante@nasittuq.com

3. Does the applicant hold the necessary property rights? No.

4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)? If so, please provide letter of authorization.

   Please see attached **Annex A** which contains the authorization in:

   a. the letter dated 06 December 2007, Serial No. NWS-0757, to Ms Dionne Fillatrault, Director of Licensing, Nunavut Water Board from Ms Nancy Morin, Supply Team Leader/NWS Contract Authority, North Warning System.
   The second paragraph explains that Nasittuq was awarded a contract by Canada to operate and maintain the North Warning System (NWS) in November 2001 and that "possession, care, custody and control over the NWS passed from Canada to Nasittuq"; and

   b. Article A2 Infrastructure and Scope of Work for the North Warning System Operation and Maintenance (excerpt from Contract Serial No. W8485-98RH01/01-NX).
   Paragraph 3 states "As of the Effective Date {of the contract}, possession and control over the North Warning System as defined in the SOW {Statement of Work} shall pass from the Crown over to the Contractor who shall have care and custody of the same."

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: 1950's Completion: 2030

CAMP CLASSIFICATION

6. Type of Camp

- ☐ Mobile (self-propelled)
- ☐ Temporary
- ☐ Seasonally Occupied: _____
- ☐ Permanent
- [X] Other: National Defence Long Range Radar Site and Logistics Support Site

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

Cambridge Bay (CAM-M) is staffed with an average site population of 18 to 22 people per day during the year, but numbers swell during the summer due to seasonal construction and occasional large groups of Third Party visitors.

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

CAM-M was built in the 1950's as one of the Distant Early Warning Line (DEW Line) radar sites which stretched from Alaska to Greenland. In the 1980's, the DEW Line in Canada evolved into the North Warning System (NWS) with radar sites extending from the Yukon across the Arctic and down the Labrador coast. CAM-M was modernized as part of this transition. Over the years, the Prime Mission of the radar sites remains unchanged: to detect airborne objects within the Arctic surveillance area.

CAM-M has been manned since the 1950's. It consists of a Long Range Radar (LRR) site and a Logistics Support Site (LSS). The LSS is a dispatch center for the unmanned LRR CAM-3 and for ten (10) Short Range Radar sites. CAM-M's facilities include site buildings with their integral mechanical and electrical systems, power generation system, fuel tanks, radar, antennas, satellite ground terminals, weather equipment, and roads.

CAMP LOCATION

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

CAM-M is situated in Nunavut on the south shore of Victoria Island in the Arctic Ocean. The site is located on 1627 acres of land along the coastal margin of extensive rolling plateau which rises gently inland from the top of steep cliffs (12 to 24 m high) on the western arm of Cambridge Bay. The geographical coordinates are: 69° 06' 52" N and 105° 07' 14" W.

The terrain consists of a gently rising plateau broken by innumerable swamp-margined lakes and ponds (about 30 m above sea level). Surface materials in the area consist of sands, gravels

9. continued

and cobbles, overlain by organic muds and silts and fine sands in wet areas. The most prominent feature is Mount Pelly, 160 m high, located approximately 11 km northwest of the site. Vegetation includes grasses, wildflowers, and arctic willow in drier areas and grassy swards, sedges, mosses, and wildflowers in wetter areas.

In the immediate vicinity of the site, arctic fox, arctic hare, ptarmigan, ravens, raptors, and waterfowl can be seen. Ravens have nested on-site. Raptors perch on the facilities of the site as they offer good vantage points over the flat terrain. Beyond the immediate vicinity of the site, wildlife is abundant with muskox, caribou, arctic fox, and seal.

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 location of the site was based on the National Prime Mission (National Defence) requirements.

See attached **Annex B** CAM-M Site Plan Drawing (Serial H-C25/4-8400-102) and attached **Annex C** CAM-M Aerial Photo.

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 (direction and distance in km):

Cambridge Bay, Nunavut, 2.5 km east on the north shore of the main inlet and 4 km away by road.

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

Not applicable. CAM-M has existed at this location since the 1950's, and its prime mission work is unchanged. The local community, Cambridge Bay, is familiar with the radar site. Some Cambridge Bay residents work at the site as Nasittuq employees, and Cambridge Bay businesses conduct business with the site.

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.)
- [X] Other National Prime Mission (National Defence radar site)
  (therefore questions # 16 to 22 are not applicable.)

16. Activities (check all applicable)

Not applicable – not a mining camp.

- ☐ 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):

Not applicable – not a mining camp.

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

DRILLING INFORMATION

18. Drilling Activities

Not applicable – not a mining camp.

- ☐ Land Based drilling
- ☐ Drilling on ice

19. Describe what will be done with drill cuttings?

Not applicable – not a mining camp.

20. Describe what will be done with drill water?

Not applicable – not a mining camp.

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.

Not applicable – not a mining camp.

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

Not applicable – not a mining camp.

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.

Nasittuq's Spill Contingency Plan is attached as **Annex D**.

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

Two (2) spill kits are on-site:
- the POL (petroleum, oil, lubricants) Spill Kit is located in the hangar; and
- the Chemical Spill Kit is located in the LSS building.

The locations are shown on **Annex B** CAM-M Site Plan Drawing (Serial H-C25/4-8400-102).

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

Jet A1 is the fuel used on-site. Jet A1 fuel tanks and locations are listed below.

Tank Size	LOC ID	Actual Capacity*	Location	Type of fuel
946,300L	CAMW22A	800,316L	Summit	PGS
946,300L	CAMW22C	800,316L	Beach	PGS
75,000L	CAMW22D	70,500L	Power Plant	PGS
69,200L	CAMW20B	64,860L	Apron	Aviation
69,200L	CAMW20C	64,860L	Apron	Aviation
946,300L	CAMW20D	800,316L	Beach	Aviation\ PGS
SUMMIT TOTAL		800,316L		
BEACH TOTAL		1,600,632L		
APRON TOTAL		129,720L		
TOTAL:		2,601,168L		

Tanks: The total volume of usable fuel on site is 2,601,168L.

See **Annex E** for the Jet A1 MSDS.

Other items such as batteries, aerosols, and cleaning products are stored in the warehouse and in the buildings where they are used. Drums of oil and glycol and a limited number of cylinders such as acetylene and oxygen are stored outside on the concrete pad of the outdoor storage area as shown on **Annex B** CAM-M Site Plan Drawing (Serial H-C25/4-8400-102).

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

The water source is the lake. See **Annex B** CAM-M Site Plan Drawing (Serial H-C25/4-8400-102).

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

[X] Domestic Use: 6 cubic metres/day Water Source: Water 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 is pumped from a natural fresh water lake to the site water tanks. The water is pumped automatically as the tanks reach a low level. There is a screen on the water intake.

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

Yes, the drinking water quality is monitored on a monthly and annual basis. Each month a bacteriological water test is performed at two locations on site to be determined by site technicians. Both samples are taken from regular consumption and food preparation areas. The bacteriological tests check the water for *E. coli* and Total Coliforms. A Heterotrophic Plate Count (HPC) is also done. All must pass for the water to be consumed.

On an annual basis a chemical water sample analysis is performed by an outside testing facility. Two samples are taken: one from the water source (lake) and one from a point of consumption inside the building. The samples are shipped to a testing facility where they test for the physical and chemical water properties listed below.

Physical and Chemical Parameters:

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

Bacteriological Parameters:

E. coli	Heterotrophic Plate Count (HPC)
Fecal streptococci	Total and Fecal coliforms

30. Will drinking water be treated? How?

The drinking water is treated by sediment filters, granular activated carbon filters and an ultraviolet (UV) filtration system.

31. Will water be stored on site?

Raw (untreated) water is stored in two large 2,000 gallon tanks next to CDL-1 Raw Water Intake. See **Annex B** CAM-M Site Plan Drawing (Serial No. H-C25/4-8400-102).

Drinking water is piped directly to water taps. It is not stored on-site as the potable water tanks have been decommissioned.

WASTE TREATMENT AND DISPOSAL

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

[X] Camp Sewage (blackwater)

The sewage (blackwater) and grey water at CAM-MAIN are both handled by a tertiary wastewater treatment system, **Cycle-let®** located in the sewage treatment plant which includes the sampling port CDL-2. The system is monitored by on-site personnel and is maintained by CWC Wastewater Services Inc. on a quarterly basis. 60 to 80% of the treated water is recycled as on-site urinal/toilet flush water, with the excess passing to a designated grey water outfall area.

An average of 6 cubic meters per day of sewage (blackwater) and grey water is processed. Of this total, 3.6 to 4.8 cubic meters per day of the treated water is recycled as urinal/toilet flush water and 1.2 to 2.4 cubic meters per day goes to the grey water outfall area.

See **Annex B** CAM-M Site Plan Drawing (Serial No. H-C25/4-8400-102) for the location of the sewage treatment plant.

[X] Camp Greywater

Grey water and sewage (blackwater) are treated by a tertiary wastewater treatment system. See "Camp Sewage (blackwater)" description above.

[X] Solid Waste

Solid waste is sent to the Cambridge Bay community landfill twice a week. Approximately 1 to 1.4 cubic meters per day of solid waste is generated.

[X] Bulky Items/Scrap Metal

These items are stored on a pallet line and retrograded for disposal outside of Nunavut as required, typically every two to four years.

32. continued

[X] Waste Oil/Hazardous Waste

These items are retrograded to a licensed disposal facility located outside of Nunavut every year.

An average annual retrograde typically includes:
- 25 drums Waste oil
- 3 drums Waste glycol
- 6 drums Waste fuel
- 6 drums Waste carbon filters (sewage treatment plant's charcoal filters)
- 1 crate Waste paint
- 1 crate Waste batteries, wet, filled with acid
- 1 crate Waste batteries, nonspillable
- 1 cylinder Waste acetylene, dissolved
- 2 to 4 cylinders Waste refrigerant gases
- 2 to 6 cylinders Waste propane
- 0.5 drum Waste aerosols

[X] Empty Barrels/Fuel Drums

These items are re-used to contain the same liquids.

☐ Other:

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?**

Non-combustible, nonhazardous waste is sent to the Cambridge Bay community landfill. Non-combustible, hazardous waste is retrograded to a licensed disposal facility outside of Nunavut.

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

Not applicable.

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

CAM-M is equipped with a tertiary wastewater treatment system located in the sewage treatment plant (CDL-2) which treats both blackwater and greywater. 60 to 80% of the treated water is recycled as on-site urinal/toilet flush water, with the excess passing to a designated grey water outfall area.

Samples of the treated water will be taken four (4) times a year from sampling port CDL-2 (as shown on **Annex B** CAM-M Site Plan Drawing, Serial No. H-C25/4-8400-102), the final discharge point beyond which Nasittuq no longer controls the quality of the effluent.

Samples will be analyzed for the following parameters:

(a) Biochemical Oxygen Demand (BOD), total suspended solids (TSS), fecal coliforms, pH, phenols, and oil & grease for compliance with the *Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments, April 1976*;

(b) total arsenic, total copper, total iron, total mercury, total zinc, sulphate, total cadmium, total chromium, total lead, and total nickel for compliance with the *NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories, 1992*; and

(c) nitrate-nitrite, sodium, magnesium, conductivity, ammonia nitrogen, potassium, and calcium.

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 tertiary wastewater treatment system has been used since it was installed in 1995.

ABANDONMENT AND RESTORATION

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

Not applicable. The Prime Mission is scheduled to at least 2030. No abandonment or restoration is planned at this time.

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: _____

Bibliography:

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

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

Annex A

- Letter dated 06 December 2007, Serial No. NWS-0757, to Ms Dionne Fillatrault, Director of Licensing, Nunavut Water Board

- Article A2 Infrastructure and Scope of Work for the North Warning System Operation and Maintenance (excerpt from Contract Serial No. W8485-98RH01/01-NX)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

NWSO Project Office
Ottawa, Canada
K1A OK2

6 December 2007

02NX.W8485-98RH01

Ser. No. NWS-0757

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1J0

ATTENTION: Dionne Filiatrault
Director of Licensing

Subject: Application for License Amendment

Dear Ms. Filiatrault:

To confirm our conversation in November 2007, it has been brought to the attention of the Government of Canada ("Canada") that the Nasittuq Corporation ("Nasittuq") mistakenly named the Department of National Defence as the "Licensee" in six (6) water licenses approved by the Nunavut Water Board, copies of which are attached hereto (the "Water Licenses"). Canada is seeking the assistance of the Nunavut Water Board (the "Board") to correct this error.

Nasittuq was awarded a contract by Canada to operate and maintain the North Warning System (the "NWS") in November 2001 (the "Contract"). Pursuant to the Contract, possession, care, custody and control over the NWS passed from Canada to Nasittuq. In this regard, Nasittuq became responsible for all aspects of the NWS sites including, but not limited to all environmental, financial, health and safety, management and security activities. As a result, Nasittuq is responsible for operating, maintaining, managing and controlling the "waste", as such term is defined in the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (the "Act"), on the six (6) sites (the "Sites") for which the Water Licenses have been obtained.

Sub-paragraph 43(1)(b)(iii) of the Act provides the Board with the authority to amend any condition of a license where the Board considers the amendment to be in the public interest.

In the interest of providing transparency to the public concerning the identity of the operator who is responsible for operating, maintaining, managing and controlling the waste of the Sites subject to the Water Licenses, it is requested that the Board amend the name of the "Licensee" from the Department of National Defence to the Nasittuq Corporation in the following Water Licenses:

(1) Water License NWB6BAF0409 – Type "B", located in BAF-3 North Warning System Site, Brevoort Island, Baffin Region, Nunavut (the "License"). The License was issued on February 17, 2004 to the Department of National Defence, Government of Canada, expiring on February 28, 2009;

(2) Water License NWB6FOH0409 – Type "B", located in FOX-M North Warning System Site, Hall Beach, Baffin Region, Nunavut (the "License"). The License was issued on June 25, 2004 to the Department of National Defence, Government of Canada, expiring on 30 June 30, 2009;

(3) Water License NWB6SHE0409 – Type "B", located in CAM-3 North Warning System Site, Shepherd Bay, Kitikmeot Region, Nunavut (the "License"). The License was issued on February 17, 2004 to the Department of National Defence, Government of Canada, expiring on February 28, 2009;

(4) Water License NWB6CAM0409 – Type "B", located in CAM-M North Warning System Site, Cambridge Bay, Kitikmeot Region, Nunavut (the "License"). The License was issued on June 24, 2004 to the Department of National Defence, Government of Canada, expiring on June 30, 2009;

(5) Water License NWB6DYE0409 – Type "B", located in DYE-M North Warning System Site, Cape Dyer, Baffin Region, Nunavut (the "License"). The License was issued on February 17, 2004 to the Department of National Defence, Government of Canada, expiring on February 28, 2009;

(6) Water License NWB6FOX0409 – Type "B", located in FOX-3 North Warning System Site, Dewer Lakes, Baffin Region, Nunavut (the "License"). The License was issued on February 17, 2004 to the Department of National Defence, Government of Canada, expiring on February 28, 2009;

It should be noted that Canada has not given its authority to Nasittuq to act as its agent in this matter. In fact, the Contract requires Nasittuq to obtain all necessary permit and licenses under federal, provincial and municipal legislation so that it may carry out its contractual obligations on its own behalf. Therefore, Nasittuq is not an agent of Canada.

Thank you in advance for assisting Canada in resolving this matter. Should you require any additional information, please feel free to contact me.

Yours truly,

Nancy Morin

Nancy Morin
Supply Team Leader/NWS Contract Authority
North Warning Systems
Tel: 998-8674 - Fax: 991-1148

c.c. Marie-José Régimbal, Counsel
LCol Beaton, DND (Without Attachments)
Nasittuq Corporation (Without Attachments)

ARTICLE A2 Infrastructure and Scope of Work for the North Warning System Operation and Maintenance

1. The North Warning System consists of a Contractor Management Office located in Ottawa; eleven Long Range Radar sites located in northern Canada and Labrador; thirty-six Short Range Radar sites in northern Canada; a communications component consisting of the on-site communications for local voice and ground/air/ground radio communications at the sites and the long haul satellite communications providing the operational and administrative links between the northern sites and the Canadian Air Defence Sector at North Bay, Ontario; five Logistic Support Sites located in northern Canada to support the Long Range Radar and Short Range Radar sites; a North Warning System Control Centre located at North Bay, Ontario; a North Warning System Support Centre located at North Bay, Ontario. The North Warning System is further described in Schedule "A".

2. The Contractor shall provide North Warning System operation and maintenance consisting of the Work described in the SOW attached as Schedule "A". Without restricting any obligation of the Contractor expressly contained elsewhere in this Contract, the operation and maintenance of the North Warning System consist only of the Work described in the SOW.

3. As of the Effective Date, possession and control over the North Warning System as defined in the SOW shall pass from the Crown over to the Contractor who shall have care and custody of the same. Without restricting any obligation of the Contractor expressly contained elsewhere in this Contract, the obligations of the Contractor with respect to care, custody and control of the North Warning System are only as described in the SOW.

4. Without restricting the generality of Subarticle 2, it is the responsibility of the Contractor, to inspect, test and correct deficiencies, if any, in the North Warning System according to the terms of the SOW.

The Contractor shall not be liable for any loss, Cost or expense associated with correcting deficiencies in the North Warning System, if the deficiencies are:

a) not attributable to the act or omission of the Contractor; or
b) hidden problems or defects not ascertainable in the performance of the Work.

Annex B

CAM-M Site Plan Drawing (Serial H-C25/4-8400-102)