



Water Resources Division  
Nunavut Regional Office  
Iqaluit, NU X0A 0H0

Our File/CIDM's #: 351340

September 8, 2009

Richard Dwyer  
Licensing Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0A 1J0

**Re: Type "B" Water Licence Renewals, Department of National Defence (DND): 3BC-BAF0409 – Brevoort Island Project (BAF-3), 3BC-FOD0409 – Dewar Lakes Project (FOX-3), 3BC-SHE0409 – Shepherd Bay Project (CAM-3), 3BC-DYE0409 – Cape Dyer Project (DYE-M), 3BC-CAM0409 – Cambridge Bay Project (CAM-M), 3BC-FOH0409 – Hall Beach Project (FOX-H)**

Please be advised that Indian and Northern Affairs Canada (INAC) has completed a review of six (6) Type "B" Water Licence Renewal applications for the Department of National Defence (DND), including Water Licence #3BC-BAF0409 - Brevoort Island Project (BAF-3); #3BC-FOD0409 - Dewar Lakes Project (FOX-3); #3BC-SHE0409 - Shepherd Bay Project (CAM-3); #3BC-DYE0409 - Cape Dyer Project (DYE-M); #3BC-CAM0409 - Cambridge Bay Project (CAM-M); #3BC-FOH0409 - Hall Beach Project (FOX-H).

All associated documents related to this licence posted on the NWB ftp site under 3BC-BAF, 3BC-FOD, 3BC-SHE, 3BC-DYE, 3BC-CAM and 3BC-FOH were included in my review (see attached Technical Review Memo).

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4738 or by email at [Andrea.Cull@ainc-ianc.gc.ca](mailto:Andrea.Cull@ainc-ianc.gc.ca)

Yours truly,

*Original Signed By*

Andrea Cull  
Water Management Specialist

Cc: Kevin Buck – Manager of Water Resources, INAC  
Peter Kusugak – Manager of Field Operations, INAC  
Andrew Keim – Water Resources Officer, INAC



## Technical Review Memo

**To:** Richard Dwyer – Licensing Administrator, Nunavut Water Board

**From:** Andrea Cull – Water Management Specialist, Indian & Northern Affairs Canada

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**Re: Type “B” Water Licence Renewals, Department of National Defence (DND): 3BC-BAF0409 – Brevoort Island Project (BAF-3), 3BC-FOD0409 – Dewar Lakes Project (FOX-3), 3BC-SHE0409 – Shepherd Bay Project (CAM-3), 3BC-DYE0409 – Cape Dyer Project (DYE-M), 3BC-CAM0409 – Cambridge Bay Project (CAM-M), 3BC-FOH0409 – Hall Beach Project (FOX-H)**

Water licence #'s 3BC-BAF0409, 3BC-FOD0409, 3BC-SHE0409 and 3BC-DYE0409 were all due to expire Feb 28, 2009. DND submitted four amendment applications to the NWB on Feb 11, 2009 requesting that the water licenses be extended for a period of six months to allow work to continue on site and provide such time that Nasittuq Corporation (contracted site operator) could be issued new water licenses by the Board. At that time, DND intended to apply to cancel their licenses. As a result of reconsideration DND has opted to renew these licenses in their name and not the contracted site operator's Nasittuq.

With respect to the existing water licenses #3BC-CAM0409 (CAM-M site) and 3BC-FOH0409 (FOX-H site) set to expire on June 30, 2009, Nasittuq has applied for a new licence as operator of the site (contracted by DND). Similar to the above renewals DND has chosen to re-apply for the renewal of these licenses at this time.

All of the above mentioned water licence renewal applications were submitted by DND and were received by the Board on July 30, 2009.

As a result of this review INAC recommends that the Board impose all of the comments/recommendations that were submitted by INAC between the dates of Feb 24 and March 4, 2009 in regard to the above mentioned projects (please see these 6 attached letters – in response to Nasittuq Corporation's applications to renew).

INAC also recommends that the NWB impose applicable standard conditions from the existing water licence #'s 3BC-BAF0409, 3BC-FOD0409, 3BC-SHE0409, 3BC-DYE0409, 3BC-CAM0409 and 3BC-FOH0409 on any renewed water licenses. In addition the following additional comments/recommendations are provided for your consideration in the licence approval process.

### **Recommendations/Comments:**

**Re: Water licence #3BC-BAF0409, 3BC-FOD0409, 3BC-SHE0409 and 3BC-DYE0409**

#### **Sewage Disposal**

In INAC's 2008 inspection report for 3BC-BAF0409 it was noted that this site does not have a sewage lagoon or any other sewage waste treatment on site. INAC could not perform an inspection in 2009.



*As written in the 2008 inspection report for 3BC-BAF0409: Contrary to issued license, Human wastes are macerated and discharged directly to environment via discharge pipe. No Lagoon or sump is present on site.*

During 2009 site inspections of 3BC-FOD0409, 3BC-SHE0409 and 3BC-DYE0409 by an INAC Water Resources Officer, it was noted that these sites also do not have sewage lagoons or any sewage waste treatment on site.

*As written in the 2009 inspection reports: Human wastes are not treated; rather they are discharged directly to the environment via an outfall pipe contrary to the existing licence. Previously the Inspector required that the Licensee comply with the terms of the existing licence. This issue is to be addressed prior to the period of the next inspection or enforcement actions will be undertaken under the Act.*

Parts D, Item 5, of the existing water licenses (3BC-BAF0409, 3BC-FOD0409, 3BC-SHE0409 and 3BC-DYE0409) require that the Licensee shall manage all sewage through the use of Incinolet toilets, and dispose of all resulting ash in the approved on-site landfill facility. The disposal of sewage waste directly to the environment, as noted by the Inspector, appears to be a violation of Section 12 of the Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA), in that waste is being deposited in a manner contrary to Board approval. INAC feels that it is unacceptable to dispose of sewage waste without prior approved treatment.

Therefore INAC suggests that the Board impose an additional condition to any renewed license in these cases which would require a Compliance Plan with firm dates of implementation. The Plan at a minimum should include the installation of an appropriate sewage treatment system for both greywater and blackwater, an estimate of the amount of total wastewater generated at the site, restoration/clean-up of areas where raw sewage has been deposited, and an acceptable interim treatment system (portable, holding tanks, etc). The Plan should be submitted 30 days after renewal.



Nunavut Regional Office  
Operations Directorate  
Water Resources Division  
P.O. Box 100  
Iqaluit, NU X0A 0H0

File #9545-2-3.3BC.DYEA  
CIDMS #313930

March 4, 2009

*Via Email*

Phyllis Beaulieu  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0E 1J0

**Subject      Water License #3BC-DYE----, Nasittuq Corporation, Cape Dyer Project, Qikqtani Region, New Application**

Dear Phyllis,

Please be advised that on behalf of Indian and Northern Affairs Canada (INAC), I have reviewed the above referenced Type B Water License Application submitted by Nasittuq Corporation to the Nunavut Water Board for approval.

A Technical Intervention Memorandum (attached) is provided to the Board for consideration.

Should you have any questions regarding this submission, feel free to contact me at 867-975-4555 or [David.Abernethy@inac-ainc.gc.ca](mailto:David.Abernethy@inac-ainc.gc.ca).

Regards,  
David W. Abernethy

Cc.    Tanya Trenholm, Water Resources Division Manager - Acting  
Kevin Buck, Water Resources Division Manager  
Bernie MacIsaac, Field Operations Division Manager

# Technical Review Memorandum

Date: March 4/09

To: Phyllis Beaulieu, Nunavut Water Board

From: David Abernethy, Indian and Northern Affairs Canada, Water Resources Division, Iqaluit, NU

Re: **Water License #3BC-DYE----, Nasittuq Corporation, Cape Dyer Project, Qikqtani Region, New Application**

## A. Description

The Nunavut Water Board (NWB or Board) received a Type B water license application from the Nasittuq Corporation (Nasittuq) on Oct. 3/08 to allow for water use and waste disposal associated with the operation and maintenance of Canada's North Warning System Long Range Radar Site #DYE-M (Cape Dyer). The Cape Dyer Project is an unmanned radar site used by the Department of National Defence (DND) to gather information concerning airborne activity within the arctic surveillance area. This site is located on Baffin Island and has coordinates of 66°40'05 north latitude, 61°21'13" west longitude. The NWB requested comments from interested parties with regard to this application on Jan. 28/09.

The Department of National Defence currently holds a Type B water license, #3BC-DYE0409, allowing for water use and waste disposal activities associated with the operation and maintenance of the Cape Dyer Project. The water license application submitted by Nasittuq is intended to change the licensee for this project, in terms of its operation and maintenance, from DND to Nasittuq.

The application includes the following documents:

- Cover letter dated Sept. 30/08
- Water License Application Form
  - Annex A – Site Plan Drawings
  - Annex B – Environmental Evaluation
- Supplementary Questionnaire
  - Annex A – Dec. 6/07 Letter to D. Filiatrault
  - Article A2 – Infrastructure and Scope of Work
  - Annex B – Site Plan Drawings
  - Annex C – Aerial Photo
  - Annex D – Spill Contingency Plan
  - Annex E – MSDS Sheets
- English and Inuktitut Executive Summaries

- Letter dated Oct. 14/08 with drawings attached
- Letters dated Nov. 28/08 and Jan. 12/09 – Responses to Issues and Concerns
- Site Specific Spill Contingency Plan for DYE-M, dated Nov. 25/08
- Insurance Cover Note, dated Sept. 28/06

In its January 28/09 notice of Nasittuq's water license application, the NWB requested interested parties to provide comments on the followings topics,

1. *Owner vs. Operator Responsibility for Site Remediation;*
2. *Adequacy of Amount and Form of Proposed Security; and,*
3. *Request to Treat Stamped and As-built Drawings of Tank Farms as Confidential.*

## B. Comments / Recommendations

### 1. General

- Terms and conditions of existing licence #3BC-DYE409 issued to DND should be incorporated into the new licence applied for by Nasittuq with some exceptions.
- There should be no open burning of plastics, wood treated with preservatives, electrical wire, Styrofoam, asbestos, or painted wood. The reason for this is to prevent or minimize impacts to surface waters from the deposition of wastes associated with incomplete combustion and the leaching of ash residue through run-off.

### 2. Owner vs. Operator Responsibility for Site Remediation

- Defence Canada Construction's (DCC) water license #1BR-DYE0409, is specific to site remediation activities associated with the Distant Early Warning (DEW) Line Clean-up Project. As such, INAC supports a separation of licensing in this instance.

### 3. Adequacy of Amount and Form of Proposed Security

- INAC recommends that the Board impose a license condition that requires Nasittuq to provide Cover Notes / up-to-date proof of environmental liability insurance on an annual basis. This can be included as an Annual Report requirement.

#### **4. Request to Treat Stamped and As-built Drawings of Tank Farms as Confidential**

- At this time, INAC does not have any concerns with regard to Nasittuq's request to have stamped and as-built drawings of the Cape Dyer Project's fuel tank farm treated by the NWB as confidential.

#### **5. Sewage Treatment**

- Sewage generated at the Cape Dyer Project during "ramp-up" conditions is collected in a tank and then discharged from an outfall pipe to a designated area. Up to ten (10) cubic metres are discharged at one time from two (2) to five (5) times a year. An incineration-toilet is also available for use. Any ash that is generated from this toilet is disposed in the on-site landfill facility.

Part D, Item #5 of water license #3BM-DYE0409 requires the Licensee to manage all sewage through the use of Incinolet toilets, and dispose of all resulting ash. This condition should continue to be applied. It is understood that sewage currently discharged to the "designated area" does not receive treatment and as a result, can impact surface water in the receiving environment. If this is the case, such practices must not continue.

#### **6. Greywater Treatment**

- Part D, Item #4 of Water license #3BC-DYE0409 requires that all greywater be discharged and contained in a sump located at least thirty (30) metres from the high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created. INAC recommends that this condition continue to be applied in a new license held by Nasittuq.

#### **7. Spill Contingency Plan**

- The Project's Spill Contingency Plan should include a copy of the Government of Nunavut's *Spill Report Form*. This form must be completed and submitted when hazardous material/fuel spills are reported through the 24-hour Spill Report Line (Fax 867-873-6924, Telephone 867-920-8130).
- INAC recommends that secondary containment measures be implemented for all fuels stored on-site.

- Remote monitoring of fuel levels and leak detection should be installed on fuel storage tanks.

## **8. On-site Landfill Facility**

- Nasittuq states in their application that non-hazardous materials will be disposed of in an approved on-site landfill facility. There is no information regarding this landfill in the submitted application. Nasittuq must submit a site diagram indicating the landfill location at a minimum. Furthermore, if Nasittuq is proposing to use a landfill site that is approved through the DCC site remediation water licence # 1BR-DYE0409, then written permission to deposit waste in this landfill facility must be submitted to the NWB. It is noted that the DCC site remediation licence expires on May 31/09. Therefore, in addition, Nasittuq should provide a comprehensive waste management plan to the Board for approval within 3 months of the license issuance. The plan must contemplate waste disposal options should the landfill be closed and/or backhauling of wastes for disposal at an approved facility.