

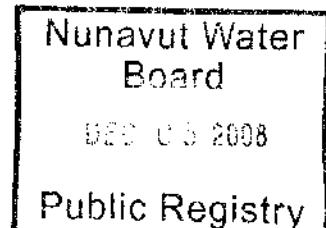


*An ATCO Frontec and Pan Arctic Inuit Company*

Serial No. 2163-CNC

28 November 2008

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



Attention: Mr. Deon Bridge, Technical Advisor

**Subject:** **Response to Issues and Concerns associated with Water Licence Applications for CAM-M, FOX-M, CAM-3, FOX-3, DYE-M and BAF-3**

**References:** A) Letter from Nunavut Water Board dated 29 October 2008

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Dear Mr. Bridge:

Thank you for your letter of 29 October 2008, Reference "A" which identified issues requiring clarification after the Nunavut Water Board's preliminary technical review of Nasittuq's applications for water licenses for the following six (6) sites:

<u>Site</u>	<u>Water Licence Application</u>
CAM-M (Cambridge Bay)	3BC-CAM0409
FOX-M (Hall Beach)	3BC-FOH0409
CAM-3 (Shepherd Bay)	3BC-SHE0409
FOX-3 (Dewar Lakes)	3BC-FOD0409
DYE-M (Cape Dyer)	3BC-DYE0409
BAF-3 (Brevoort Island)	3BC-BAF0409

Before providing answers to the specific questions in your letter, I would like to clarify a few important points. Firstly, the above licence applications have been submitted in order to comply with a Letter of Direction received from INAC following water license inspections conducted in the summer of 2008. In part, the letter directed Nasittuq Corporation ("Nasittuq") to have the existing licences, which are currently under DND's name, transferred to Nasittuq. After numerous discussions with various levels of government, we were finally advised that the existing licenses could not be transferred,

and the Nunavut Water Board ("NWB") directed us to apply for new licences. Nonetheless, it is important to underline the fact that these are not new installations, and each is currently being administered by an existing water license. Five (5) of the six (6) sites are original DEW Line stations which were commissioned in 1957. The sixth site, BAF-3, was commissioned in the late 1980's, with some of the supporting infrastructure constructed in the 1950's. In addition, given the above, please understand that Nasittuq is not the owner of the above sites, but is operating them on behalf of the Federal Government. As such, we have been inspected in the past and found in compliance with the existing licences with the exception of the disposal of waste and hazardous material. The Inspector's Letter of Direction was in fact focused on these two (2) issues specifically, with an order to cease burning and the direction to use incinerators for waste disposal. We have already implemented the former and are working on the latter.

In the spirit of full disclosure, we have provided answers to the issues that relate specifically to the points that were raised by the Inspector's Letter of Direction, and have clarified some items related to our original submission. However, some of the information you have requested was not a requirement of the original application. In these cases we will submit additional information at a later date, as more time is required to assemble it. Some information will not be provided, as noted below, for national security reasons. For ease of discussion, the issues are reviewed below in the same order as they appear in your Reference "A" letter.

## 1. **Combustible Waste**

Currently, non-hazardous combustible waste is treated as described below. Please note that hazardous combustible waste is retrograded out of Nunavut to licensed hazardous waste disposal facilities for disposal.

**CAM-M, Cambridge Bay:** Non-hazardous solid waste, including combustible waste, is trucked to the Cambridge Bay community landfill for burning and burying. There is no incinerator at CAM-M. Open burning at CAM-M is banned by the NWB.

**FOX-M, Hall Beach:** Non-hazardous solid waste, including combustible waste, is trucked to the Hall Beach community landfill for burning and burying. There is no incinerator at FOX-M. Open burning at FOX-M is banned by the NWB.

**CAM-3, Shepherd Bay:** Combustible waste is flown back to CAM-M where it is trucked to the Cambridge Bay community landfill for burning and burying. There is no incinerator yet at CAM-3. Open burning at CAM-3 is banned by the NWB.

**FOX-3, Dewar Lakes:** Combustible waste is flown back to FOX-M where it is trucked to the Hall Beach community landfill for burning and burying. There is no incinerator yet at FOX-3. Open burning at FOX-3 is banned by the NWB.

**DYE-M, Cape Dyer:** Combustible waste is flown back to the closest support site, Logistics Support Site Iqaluit (LSS-Q), where it is sent to the Iqaluit community landfill. There is no incinerator yet at DYE-MAIN. Open burning at DYE-M is banned by the NWB.

**BAF-3, Brevoort Island:** Combustible waste is flown back to the closest support site, Logistics Support Site Iqaluit (LSS-Q), where it is sent to the Iqaluit community landfill. There is an incinerator at BAF-3, but it is not being used because it is unclear whether NWB approves of its use. In Nasittuq's cover letter of 30 September 2008 for the BAF-3 water licence application, Nasittuq requests NWB's approval to use the BAF-3 incinerator and requests the approval be incorporated into the water licence. The incinerator is described in the cover letter and in the Exploration/Remote Camp Supplementary Questionnaire, Section 33 (Consumat Systems Inc. Model C-32P incinerator).

Nasittuq is currently researching incinerators for use at CAM-3, FOX-3, and DYE-M. Nasittuq has received a draft Incineration note from the Nunavut Department of Environment. This document proposes compliance with the Canada-Wide Standards for Mercury Emissions and Canada-Wide Standards for Dioxins and Furans. On researching these standards, Nasittuq found that they are written for activities in which Nasittuq does not participate. The full names of the standards describe the activities:

- a. Canada-Wide Standards for Mercury Emissions. This applies to two (2) sectors, "Base metal smelting" and "Waste incineration". Note: Mercury emissions can be avoided in waste incineration by not incinerating items that can contain mercury such as mercury-containing batteries and treated wood;
- b. Canada-Wide Standards for Dioxins and Furans: Iron Sintering Plants. Iron sintering plants are unique to Ontario;
- c. Canada-Wide Standards for Dioxins and Furans: Conical Waste Combustion of Municipal Waste. Conical waste combustors are unique to Newfoundland and Labrador;
- d. Canada-Wide Standards for Dioxins and Furans: Steel Manufacturing Electric Arc Furnaces.

As stated in each site's Water Licence Application Form, Section 8. Solid Waste, and the Exploration/Remote Camp Supplementary Questionnaire, Section 32. Solid Waste - Nasittuq will strive to achieve compliance with the Canada-Wide Standards for Mercury Emissions and Canada-Wide Standards for Dioxins and Furans by separating out and not incinerating waste that may generate hazardous emissions such as treated wood, plastics, rubber, electrical wire, hazardous materials, and articles containing hazardous materials. However, if the NWB has approved incinerators for other parties, Nasittuq would welcome information about these existing incinerators which meet NWB's requirements. Please note that there is no guidance or regulatory document for incinerators listed in the Exploration/ Remote Camp Supplementary Questionnaire, Section 40. Regulatory Information - Since incineration is an important matter to the NWB and applicants alike, some guidance documentation on this matter would be appreciated.

## 2. Landfills

The sites with operating landfills are FOX-3, DYE-M, and BAF-3. The sites with closed landfills are CAM-M, FOX-M, CAM-3, FOX-3, DYE-M, and BAF-3. The closed landfills are from activities dating as far back as the 1950's and from the recent Dcw Line Clean-Up (DLCU) activities.

## 3. Person Days

The number of person days at all six (6) sites fluctuates each year, depending on periodic project work and the number of Third Party Support Requests Nasittuq receives for those wishing to stay at the site for any number of reasons. We will estimate the maximum annual person days as requested, and send this to you at a later date.

#### **4. Stamped As-Built Drawings Of Tank Farms**

Nasittuq does not have as-built engineered drawings for all tank farms. The bulk of the POL tanks at all six (6) sites were constructed circa 1955, most as part of original DEW Line construction. Drawings for these were completed for, and turned over to, the United States Air Force, and ultimately passed to the care custody and control of Nasittuq as the O&M contractor for the North Warning System (NWS). Nasittuq has as-built engineered drawings for work that our engineers have done, or that a subcontractor has done on our behalf. These drawings are stamped, but not by a P.Eng. registered in Nunavut, as the majority of this work was completed before Nunavut was created. Drawings will be sent to you at a later date. Please note that these drawings are not to be posted to the NWB website or to any Internet site in the interest of national security. The NWS sites are military installations and certain information, such as fuel infrastructure, is not for public knowledge.

#### **5. Spill Contingency Plans**

Site specific spill contingency plans are enclosed. The plans include the location and quantities of fuels and drummed chemicals as requested. The contact persons on each site are not named. Since many of our staff work on rotation, Nasittuq uses positions to dictate who does what in the event of a spill. For instance, a Logistics person will issue the sorbent material. All Logistics staff are trained to do this, so the specific name is not needed. Whatever Logistics person is on-site will be able to do this work. The specific roles and duties of the positions are clearly stated in the Spill Contingency Plan. Refueling procedures are explained in general for each site and these should be satisfactory for you. Detailed site-specific information will not be released for national security reasons.

#### **6. Grey Water and Sewage Waste Disposal**

The Cycle-let® sewage handling systems at CAM-M and FOX-M treat sewage to the point where the end product is water.

BAF-3 was built in the mid 1980's and the original system incorporated a septic tank system. The system was upgraded in 2003, and still incorporates a septic tank. This type of sewage system is allowed under the Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments 1976, section 5.1.

CAM-3, FOX-3, and DYE-M were built in the 1950's. At each site, sewage and grey water are combined in the sewage system which comprises a sump, holding tank, and masticating pump within the building train, and a sewage outfall pipe leading to an outfall area on the land. Since the sites have been unattended (unmanned) since 1995, there is little sewage generated from the quarterly site visits. The amount of sewage generated from summer activity depends on the number of people on-site. The effluent discharged to the land does not pollute bodies of water, and does not harm flora or fauna. There is green growth immediately at the discharge area due to additional nutrients in the discharge.

Nasittuq recognizes that the NWB has the legal right under the Nunavut Waters and Nunavut Surface Rights Tribunal Act, section 57(a), to state the effluent standards the Board considers acceptable in the absence of regulations. However, since the affected sites (CAM-3, FOX-3, and DYE-M) are isolated sites and are unattended (unmanned) for most of the year, a sewage treatment plant requiring operation and maintenance is not an immediate option. Given the isolated nature of the sites, Nasittuq requests the current simple system be allowed for the time being with samples taken monthly when there is a discharge from the effluent pipe. If the Board feels that, after reviewing results of sample analysis, that effluent quality must be improved, then the NWB can inform Nasittuq that a different system is required.

## 7. Remediation Activities

Considerable remediation activities have taken place at some of these sites as part of the on-going DEW Line Clean-Up ("DLCU") project. However, this work is not being undertaken by Nasittuq, and we assume that those implementing the work have acquired a separate water licence for these activities. A point of contact for DLCU activities is as follows:

Mr. Kim Kalen,  
Environmental Officer,  
North Warning System  
(613) 998-8482

Nasittuq is implementing remediation work at BAF-3 resulting from the spill reported in January 2007. A separate Land Farm Questionnaire was submitted with our application for BAF-3. The point of contact for this effort is as follows:

Mr. Scott Charland,  
Senior Manager, Planning & Design,  
North Warning System Project,  
Nasittuq Corporation  
(613) 787-9626

8. **BAF-3 Land Farm Remediation to 2500 ppm TPH**

The 2500 ppm TPH level was taken from the DLCU criteria for contaminated soils which was used for remediation at other sites. The DLCU criteria are from the DLCU Protocol which was originally endorsed by various government agencies including Environment Canada, Indian and Northern Affairs, Government of the Northwest Territories, and Department of Fisheries and Oceans in October 1991. The original version was slightly modified in April 1994. The DLCU criteria are defined in the Agreement between Nunavut Tunngavik Incorporated ("NTI") and Her Majesty in the Right of Canada as Represented by the Minister of National Defence for the Clean-Up and Restoration of Distant Early Warning Sites within the Nunavut Settlement Region (1998). The 1998 BAF-3 site investigation by the Environmental Sciences Group, Royal Military College, Kingston, found no contaminated soil where the 2007 spill occurred. As a result, we do not consider testing of the soil for criteria other than TPH to be necessary. The end use of the reclaimed soils is to place them as backfill for the excavated areas. There is no other end use in mind.

We trust the above will allow you to expedite the processing of our Water License Applications for these new licenses. We have some urgency, as a few of these licences are due to expire in February 2009. If you have any further questions, please contact Mr. Scott Charland, at the contact number noted above or by e-mail at [scott.charland@nasittuq.com](mailto: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, and Contracts

Attachments:

1. Spill Contingency Plan for CAM-M
2. Spill Contingency Plan for FOX-M
3. Spill Contingency Plan for FOX-3
4. Spill Contingency Plan for CAM-3
5. Spill Contingency Plan for DYE-M
6. Spill Contingency Plan for BAF-3