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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

File: 1BR-GLA0308 (formerly NWB5GLA0308)

March 6, 2007

Philip Warren, DLCU Environmental Officer
Defence Construction Canada
350 Albert Street
Ottawa, ON K1A 0K3
Email: Philip.Warren@dcc-cdc.gc.ca

Re: CAM-2 (1BR-GLA) DEW Line Site Activities and Licence Requirements

Dear Mr. Warren:

The Nunavut Water Board (NWB) has reviewed DCC submitted documents pertaining to the 2005 Annual Report, Monitoring Program, QA/QC Plan, and the Abandonment and Restoration (A&R) Plan for the CAM-2 DEW Line Site, Gladman Point. The NWB requests a response to each of the following:

1. The Monitoring Program (prepared by UMA Engineering Ltd., dated July 16, 2003) was conditionally approved by the NWB October 1, 2004. At that time, the program included monitoring of the sewage disposal facility. Pursuant to **Part J, Item 1.i.** of the licence, and reaffirmed in the conditional approval of the monitoring plan, the proponent was to provide "GPS coordinates of all surface and subsurface sampling points". To date, a formal submission outlining the GPS coordinates have not been received for the sewage lagoon and is requested to be submitted.
2. A 2005 Monitoring Program (prepared by UMA Engineering Ltd., dated March 10, 2005) was submitted to the NWB which addresses monitoring of the landfills.
 - a. Pursuant to **Part J, Item 1.i.** of the licence, "GPS coordinates of all surface and subsurface sampling points". Select GPS coordinates were provided in the submitted program, the remainder of the monitoring stations is to be submitted to the NWB to fulfill this licence requirement.
 - b. Details of the soil sampling methods and depth of collection were not provided in the 2005 Monitoring Program and are requested.
 - c. Section 2.1 and Section 2.2 of the 2005 Monitoring Program references Figure CAM-2.4 for monitoring details for the West Landfill-North and West Landfill-South, respectively. The referenced drawing is for the Tier II Soil Disposal Facility not the landfills. Clarification is requested to address this inconsistency.
 - d. Landfill monitoring plans for West Landfill- North, West Landfill- South, and Station Landfill have been classified as "low potential environmental risk" and do not have any groundwater monitoring. What are the details that were considered to assess risk potential? Why is there no groundwater monitoring for these landfills?
 - e. A landfarm was in operation on site and closed in 2005. No monitoring data from the landfarm facility has been submitted to the NWB. Additionally, the monitoring plan makes no reference to any monitoring requirements for a landfarm. What monitoring was completed for the landfarm? It was stated in the 2005 Annual Report that contaminated soil was treated to required criteria. What criteria were employed and where was the remediated soil placed?
3. In response to the 2003 Annual report, Environment Canada (letter dated September 7, 2007) noted that the sewage lagoon did not retain fluids enter the lagoon. Environment Canada requested DCC to address how sewage was to be handled for the duration of the project, as the

lagoon was not operating properly. In the 2005 Annual Report (dated March 31, 2006), it was stated there was limited water collection opportunity from the sewage lagoon for much of the fluids leaked into the granular soils at the site. The 2005 lagoon effluent water quality data showed levels that exceeded BOD and faecal coliforms (as per **Part D, Item 3** of the licence). It is the NWB understanding that the lagoon had continued operation (from 2003 until 2005) after it was known that the lagoon did not contain fluids.

- a. Why was a lagoon that does not retain fluids, known since 2003, still in operation until 2005?
 - b. How were effluent waters from the lagoon that exceeded licence water quality requirements managed?
 - c. Is the lagoon still in operation? If not, what is the stage of abandonment and restoration of this facility and what efforts were conducted to assess if the foundation and berm soils of the lagoon were contaminated?
 - d. If the foundation and berm soils were contaminated, how were they managed or remediated?
4. Pursuant to **Part D, Item 2** of the licence, "prior to the construction and operation of the Sewage Treatment Facility, [the proponent is to] submit to the Board for approval design drawings stamped by a qualified engineer registered in Nunavut". To date, As-Built engineered qualified design drawings have not been submitted to the NWB and are requested to fulfill this licence requirement. The NWB would also like to remind DCC of the letter issued on November 1, 2005 stating the following:

As per the Annual Report Requirements addressed by the NWB to the Licensee in a letter dated September 29th, 2004, the Licensee was to respond to Environment Canada's request for further information regarding the current performance of the sewage disposal lagoon and any steps taken to address the issues described in the 2003 Annual Report. This response was to be submitted to the NWB as an addendum to the approved 2003 Annual Report. Once again the 2004 Annual Report had claimed that the sewage lagoon did not retain the discharged effluent with the discharged effluent infiltrating the ground. As per Part D, Item 2 of NWB5GLA0308 the "Licensee shall, prior to the construction and operation of the Sewage Treatment Facility, submit to the Board for approval design drawings stamped by a qualified engineer registered in Nunavut". The NWB requests details associated with the design of the Sewage Treatment Facility including the design drawings stamped by a qualified engineer and measures put in place to improve performance after notification via the September 29th, 2004 letter from the NWB.

The NWB is notifying Indian and Northern Affairs Canada through this letter on DCC's actions in not fulfilling the requirements of **Part D, Item 2**, and through DCC's own admission, repeatedly failing to contain sewage within sewage lagoon infrastructure.

5. In 2005, a revised QA/QC Plan for the collection of effluent samples and landfill monitoring program was submitted to the NWB. Pursuant to **Part J, Item 3** of the licence, the QA/QC Plan is to be "approved by an Analyst which addresses both field and laboratory requirements". Has this licence requirement been fulfilled? If so, documentation substantiating Analyst approval is to be submitted to the NWB. If not, this requirement of the licence is outstanding and the NWB requests an update on when Analyst approval will be obtained.
6. Further to *Bullet iii* of the NWB's November 1, 2005 request for additional information in the 2006 Annual Report (**Part B, Item1**):

Site photographs with complimentary documentation detailing the Water Supply Facilities, Sewage Disposal Facilities, Solid Waste Disposal Facilities, Landfarm Facility and general site.

This information was not provided to the NWB in the 2006 Annual Report.

7. Pursuant to **Part G, Item 2** of the licence, a spill contingency plan was to be submitted to the NWB for approval prior to commencement of operations. This document is outstanding and is requested to fulfill this licence requirement.
8. An A&R Plan was submitted to the NWB (prepared by UMA; dated January 23, 2006). Environment Canada issued an intervenor comments on the A&R Plan (dated March 14, 2006). The Government of Nunavut Department of Environment issued an intervenor comments on February 16, 2006. From the 2005 Annual Report, the NWB understands that many of the facilities have already undergone abandonment and restoration in 2005; however the A&R Plan was submitted in January 23, 2006. The NWB would like to point out that pursuant to **Part J, Item 1 and 2** of the licence, the proponent was to submit to the NWB "six (6) months prior to the completion of onsite activities an Abandonment and Reclamation Plan to address contractor demobilization and site remediation operations" and the plan was to be implemented "as and when approved by the Board". The NWB requests the following information:
- a. It is requested that the proponent address Environment Canada's recommendations to indicate in the A&R Plan that areas excavated of contaminated soil will follow the project's Monitoring Plan.
 - b. Referring to the Government of Nunavut Department of Environment A&R comments, it is requested that the proponent address each of the following:
 - Fuel and chemicals left on site after completion of the A&R
 - Management of combustible and non-combustible waste on site.
 - Management of garbage from any camps.
 - Waste Manifest
 - Details of final inspections.
 - c. A site plan before A&R and after A&R activities are requested to complement the general text description of A&R activities, in addition to, a list of facilities remaining on site after A&R is complete.
 - d. Pursuant to **Part I, Item 4** of the licence, the proponent is requested to provide a complete time schedule of all reclamation work. This information was not provided in the submitted A&R Plan and is requested to fulfill this licence requirement.
 - e. Since A&R activities have commenced on site prior to Board approval of the A&R Plan, it is requested that final inspections and site photographs be provided of completed A&R activities for each facility. Additionally, as-built engineered drawings and construction records of each facility constructed on site is requested to be submitted to the Board.

If you require assistance whatsoever please feel free to contact the undersigned at (867) 360-6338 or dirts@nunavutwaterboard.org.

Sincerely,

Original signed by:

Joe Murdock
Director Technical Services

cc. Jim Rogers (INAC)
Peter Kusugak (INAC)
David Abernethy (INAC)

enc. 040907NWB5GLA EC Comments 2003 Annual-IMLE.pdf
040929NWB5GLA Annual Report 2003 Letter-OTAE.pdf
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