

Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

March 6, 2015

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

Phone: (867) 360-6338 ext. 27

Fax: (867) 360-6369

Email: phyllis.beaulieu@nwb-oen.ca

Re: Hamlet of Rankin Inlet Water Licence No. 3BM-RAN1214 Amendment/Renewal Application

Dear Ms. Beaulieu,

On behalf of the Hamlet of Rankin Inlet, I am pleased to submit to the Nunavut Water Board (NWB) the enclosed Water Licence Amendment/Renewal Application with supplementary information for your reference.

The Hamlet of Rankin Inlet is requesting a twenty-three (23) year renewal of Water Licence No. 3BM-RAN1214 which expired on May 31, 2014.

Water Licence No. 3BM-RAN1214 contains many conditions related to the new Solid Waste Site. There are currently no plans to commission this site and they Licensee is requesting that these conditions be removed from the Licence. In the future, if the Licensee is contemplating an alternative Solid Waste Site, an Amendment Application will be submitted to the NWB for approval of this new site and of the abandonment and restoration of the existing Solid Waste Site.

The Hamlet of Rankin Inlet is requesting an Amendment to Water Licence No. 3BM-RAN1214 to remove/modify the following conditions:

- 1. Part F Item 1: The Licensee shall submit to the Board for approval, at least sixty (60) days prior to commissioning the New Landfill, a status Update Report and photographic record, which demonstrates implementation of the pre-commissioning recommendations outlined in the Solid Waste Management Facility Operation and Maintenance (O&M) Plan, Hamlet of Rankin Inlet, dated December, 2008, including:
 - a. The design and construction of effective draining of water surrounding the landfill;
 - b. The need to construct a hazardous waste storage area;



- c. Stockpiling of top soil in the fill area for use as cover material;
- d. Background sampling of soil and water quality of the site;
- e. Review of the O&M Plan by a bird hazard expert;
- f. The provision of signed/as-built drawings of the New Landfill and Landfarm following the completion of the above measures;
- g. Confirmation of correspondence with Transport Canada and a copy of any authorizations or recommendations provided through this consultations confirming that Transport Canada requirements have been met; and
- h. A schedule of activities.

This condition relates solely to the new Solid Waste Site. As there are no plans to commission this site in the near future, the Licensee is requesting Part F, Item 1 is removed from the Licence.

- 2. Part F, Item 4: An inspection of all engineered earthworks related to the management Waste shall be carried out annually in July or August by a Geotechnical Engineer. The engineer's report shall be submitted to the Board for review, within sixty (60) days of the inspection, including a covering letter from the Licensee outlining an implementation plan addressing each of the Geotechnical Engineer's recommendations.
 - CGS is requesting, on the behalf of the Hamlet, that this condition be modified to allow for the CGS Municipal Engineer to perform the annual inspection of the berms and engineered facilities related to the management of water and waste. This will allow for annual inspection to occur without the high costs to the Hamlet associated with bringing in a consulting geotechnical engineer. If any issues are found with the berms or other structures, appropriate measures for further study or repair will be taken. The Annual Report Card, including berm inspection, and any follow-up measures will be reported in the Annual Report.
- 3. Part G Item 1: The Licensee shall, within six (6) months of Licence issuance, revise and resubmit to the Board for approval in writing, the Hamlet of Rankin Inlet, Rankin Inlet Solid Waste Site Abandonment and Restoration (A&R) Plan, dated July 2009, for the Old Landfill. The revision shall address the following:
 - a. A clear rationale for the decision to abandon and remediate the existing site rather than the option of removing and relocating the waste materials into a new engineered facility;
 - b. Design criteria for the cover, gas ventilation system and surface water management system;



Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

- c. Containment along the base given that the facility is unlined and test pit logs are unclear in specifying whether refusal was met in frozen ground when no bedrock was encountered;
- d. Whether permafrost encapsulation was considered and the potential effects of saline permafrost conditions at the facility;
- e. A geothermal design basis for the cover;
- f. The need to monitor ground temperatures within the waste;
- g. Concerns associated with the placement of the liner's outer edges on top of natural ground as indicated in Figure 9 of the A&R Plan;
- h. Authorization for the quarry source;
- i. An assessment of alternative design strategies for the planned drainage ditches;
- j. Describe how the area will be re-graded and what drainage and erosion protection measures will be implemented for the areas where contaminated soil are planned to be removed;
- k. Justification for why the contaminated soil test pits were stopped at each of the respective depths;
- I. Clarification that the estimated contaminated soil volumes are based on removing all the soil to the top of the permafrost table or bedrock;
- m. Method for dealing with surface water flows and contact water during the planned excavation;
- n. A contingency for dealing with seepage and drainage for soil excavated below the water table;
- o. A contingency for dealing with free phase hydrocarbons and other potential liquid contaminants which may be encountered, especially near the bedrock or permafrost interfaces;
- p. Reclamation and cover requirements for expose soil within the excavations following the removal of contaminated soil;
- q. The need for water quality monitoring up-gradient of the landfill to establish background water quality; and
- r. The need to install thermistors to monitor ground temperatures.

This condition relates to the abandonment and restoration of the existing Solid Waste Site. As there are no plans to decommission this site in the near future, the Licensee is requesting Part G, Item 1 is removed from the Licence.



ュューロー しゃしゅん トライト Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

4. Part H, Item 1: The Licensee shall maintain Monitoring Program Stations at the following locations:

Monitoring Program Station Number	Description	Status
RAN-1	Unassigned	Inactive
RAN-2	Runoff from the Old Landfill	Active
RAN-3	Runoff from the New Landfill	Active Upon Commissioning
RAN-4	Discharge from the Landfarm Facility at the controlled point of release	Active
RAN-5	Monitoring well located up gradient of the Landfarm	Active
RAN-6	Monitoring well located down gradient of the Landfarm	Active

The Licensee is requesting the Monitoring Program Station Number RAN-3 is removed from the Licence. As there are no plans to commission the new Solid Waste Site in the near future, there will be no runoff from the facility.

- 5. Part H, Item 2: The Licensee shall sample monthly at Monitoring Program Station RAN-2 and RAN-3 upon commissioning, during periods of observed flow and annual discharges, to be analyzed for the following parameters...
 - The Licensee is requesting that reference to RAN-3 is removed from the condition, since there are no plans to commission the new Solid Waste Site in the near future.
- 6. Part H, Item 3: The Licensee shall carry out weekly inspection at Monitoring Program Stations RAN-2 and RAN-3 upon commissioning, from May to August inclusive, to identify effluent or water flow in order to fulfill the monitoring requirements of Part H, Item 2. A record of inspections shall be retained and made available to an Inspector upon request.

The Licensee is requesting that reference to RAN-3 is removed from the condition, since there are no plans to commission the new Solid Waste Site in the near future.



」のして[©] の しぐしゃけの へんとくてならしゃけん Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

7. Part H, Item 9: The Licensee shall install groundwater monitoring wells at the Landfarm Facility. These wells shall be located with at least one located upstream of the facility for background data collection (RAN-5) and at least one downstream of the facility (RAN-6).

The Licensee is requesting this condition to be removed from Licence. Sampling will be taken of the soil currently within the landfarm summer 2015 to determine if the soil meets CCME guidelines and can be removed from the facility. If soil meets guidelines, approval will be sought for an Abandonment and Restoration Plan for the landfarm. The Licensee wishes to decommission the landfarm and remove the landfarm as part of the municipal Licence. The Abandonment and Restoration Plan will be submitted to the NWB a minimum of six (6) months prior to abandoning the facility.

While the Licensee acknowledges that they did not comply with this condition of the Licence when issued, resources would better be used to carry-out the work needed to abandon and restore this site, than to install groundwater monitoring wells for a facility that will be decommissioned as soon as possible.

Subsequently, the Licensee requests that reference to Monitoring Program Station Number RAN-5 and RAN-6 are removed from the Licence (Part H, Item 1 and Part H, Item 10).

Please see the attached Plan for Compliance to meet the requirement of Part B, Item 10 of the Licence. This Plan for Compliance outlines the measures the Licensee will undertake to achieve full compliance with the conditions of this Licence, and addresses other areas identified as non-compliant in the AANDC Inspection Reports.

The following supporting documents are included in the Water Licence No. 3BM-RAN1214 Amendment/Renewal Application submission:

- Cover Letter to the NWB;
- Authorization Letter from the Hamlet of Rankin Inlet;
- Executive Summary;
- Executive Summary Inuktitut Translation;
- Community Information;
- Water Licence Amendment Application Form;
- Map of Solid Waste Site;
- Plan for Compliance;
- Solid Waste Management Facility Operation and Maintenance (O&M) Plan, Hamlet of Rankin Inlet prepared by Nuna Burnside, December 2008;



occa しぐしゃけん ハンマイマット しゃしょ しょう ハンマイマット Nunalingni Kavamatkunnilu Pivikhaqautikkut
Department of Community and Government Services
Ministère des Services communautaires et gouvernementaux

- Environmental Emergency Contingency Play, Hamlet of Rankin Inlet prepared by Nuna Burnside,
 December 2008; and
- Environmental Monitoring Program and Quality Assurance/Quality Control Plan, Hamlet of Rankin Inlet prepared by Nuna Burnside, December 2008.

The 2014 Annual Report will be submitted to the NWB by March 13, 2015.

The Environmental Monitoring Program and Quality Assurance/Quality Control Plan is currently being updated and will be sent to an accredited laboratory to confirm acceptance. This updated plan, including cover letter from accredited laboratory, will be submitted to the NWB by April 30, 2015.

The Solid Waste Management Facility Operation and Maintenance (O&M) Plan and Environmental Monitoring Program and Quality Assurance/Quality Control Plan are currently being reviewed and updated. The updated plans will be submitted to the NWB by August 31, 2015.

A cheque for the amount of \$30.00 will be issued to the Receiver General for Canada for the Amendment Application fee and sent by the Hamlet of Rankin Inlet to the NWB.

Please feel free to contact the undersigned if there are any questions or concerns with the enclosed application or documents.

Sincerely,

Megan Lusty, EIT

Mego des

Municipal Planning Engineer-In-Training Community and Government Services Kivalliq Region, Government of Nunavut P.O. Box 490, Rankin Inlet, NU, XOC 0G0

Phone: (867) 645-8176 Fax: (867) 645-8196 Email: <u>mlusty@gov.nu.ca</u>

Cc: Tom Ng, SAO Hamlet of Rankin Inlet

David Hohnstein, NWB Ralph Ruediger, GN-CGS Robert Savard, AANDC

Water Licence No. 3BM-RAN1214 Hamlet of Rankin Inlet, Nunavut



ᠤᠳᡄᢛᠣ᠂ᡤ᠘ᠮ᠗ᡇᡄᠵ᠋᠘ᢣᡕᡪ᠘ᢛ᠐ᢛᡇᡕ

Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

Table of Contents

Letter to the Nunavut Water Board	1	
Table of Contents	7	
Authorization Letter	8	
Executive Summary	9	
Executive Summary Inuktitut Translation	10	
Community Information	11	
Overview		11
Solid Waste		12
Water and Sewage Systems		13
Application for Water Licence Amendment	14	
Map of Solid Waste Site		
Plan for Compliance	32	