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

Nunavut Water Board
PO Box 119
GJOA HAVEN NU X0B 1J0

FAX No. 1+ 867 360 6369

Attention Dionne Filtrault P.Eng Executive director

Dear Ms Filtrault

RE : **Plan Of Action For Inspector's Direction Dated July 23 , 2008 Rankin Inlet**

Please find attached Community and Government Service's plan of action to bring the Department into compliance with the Nunavut Waters and Surface Right Tribunal Act..

This plan of action was prepared By Nunaburnside Consulting engineers and Community and Government Services has engaged this firm to complete the water license renewal application for Rankin Inlet .

We also authorize Mr. Jim Walls P.Geol. of Nunaburnside Consulting Ltd to deal directly with Nunavut Water Board on behalf of Community and Government Services in the water license renewal process.

Kindly contact Bryan Purdy for any further questions your office may have on the proposed action plan .

Your truly

Ralph Ruediger
Regional Director
Kivalliq Region
Community and Government Services



August 18, 2008

Government of Nunavut
Department of Community and Government Services
P.O. Bag 002
Rankin Inlet, Nunavut
X0C 0G0

Attention: **Mr. Bryan Purdy, P.Eng.**
Regional Municipal Planning Engineer

Re: **Response to INAC Letter and Water License Submission for Rankin Inlet**
Rankin Inlet, Nunavut
File No. N-O 14850.9

Dear Mr. Purdy,

1.0 Introduction

As discussed in our recent telephone conversations, we have reviewed the content of the letter from INAC dated July 23, 2008, entitled “Contravention of the Nunavut Water and Nunavut Surface Rights Tribunals Act – Inspectors Direction”. The letter includes the requirement to “To submit to the Inspector within 60 days a plan by which the Department of Community and Government Services, Government of Nunavut, will bring itself into compliance with the Nunavut Waters and Nunavut Surface Rights Tribunals Act”.

As requested, this letter provides the outline of a “plan” and a schedule to meet the requirements outlined by INAC.

It is our understanding that Rankin Inlet has had two water licenses as follows:

- License # NWB3GRA0207 (expired) for the Sewage Treatment System and Water Intake System (including utiladors) – licensed by Community and Government Services (CGS) of the Government of Nunavut (GN)
- License # N6L3-0779 (expired) for the Landfill, Sewage System, and Water System – licensed by the Hamlet of Rankin Inlet. Requests for a new license in 2001 and 2002 did not result in a license.

Some compliance items such as operations and maintenance (O&M) plans, annual reports, monitoring data, as-built drawings, etc. have not been submitted to the Nunavut Water Board (NWB), as required by the Terms and Conditions of the previous licenses. In order to address these issues and begin to bring the Hamlet into compliance with the requirements of the NWB, and meet the "Inspectors Direction" as outlined in the letter from INAC dated July 23, 2008, we provide herein a plan and schedule.

The "plan" to achieve compliance will consist of the following:

1. On behalf of CGS-GN prepare and submit to the Nunavut Water Board (NWB) a water licence application for:
 - Sewage Treatment Plant
 - Water Supply Intake
 - Utilidors.

The application will note infrastructure deficiencies that are out of compliance, and provide an outline of the work to be undertaken to bring the infrastructure into compliance, and a realistic engineering time line to achieve these infrastructure upgrades.

2. On behalf of the Hamlet of Rankin Inlet (in conjunction with CGS-GN) prepare and submit to the NWB a water license application for:
 - New Landfill
 - Closed Landfill
 - Landfarm.

The application will note infrastructure deficiencies that are out of compliance, and provide an outline of the work to be undertaken to bring the infrastructure into compliance, and a realistic engineering timeline to achieve these infrastructure upgrades.

The "plan" assumes the NWB will adopt the identified deficiencies and required infrastructure upgrades and timelines as "Conditions" when issuing the new water licenses.

2.0 Plan to Achieve Compliance

2.1 Overview

Recent discussions with NWB staff have clarified a number of issues with respect to NWB requirements for license amendments and renewals. The NWB also made it clear that the process is in transition, and there will be new guideline documents for submissions to be issued perhaps late in the year. This workplan is based on current NWB policies and requirements, and our current understanding of the nature of the changes to occur in the near future.

This workplan is designed to maximize the degree of compliance, recognizing that there may be components of the infrastructure that will require upgrades or alterations to achieve compliance. As discussed with the NWB, areas of non-compliance will be noted in the license application, along with a reasonable approach and timeline for addressing the outstanding issues. The purpose of outlining non-compliance issues and providing a plan for addressing them to the NWB, is that it will allow the NWB to approve the license with the conditions and timelines the Hamlet and Government of Nunavut can effectively achieve.

2.2 Preparation of a Water License Application – Hamlet Infrastructure

The plan for preparation and submission of a NWB Water License application on behalf of the Hamlet (in conjunction with CGS-GN) includes the following items:

2.2.1 Abandonment and Restoration of the Closed Landfill Site

The NWB Water License requires the submission “to the Board for approval, an Abandonment and Restoration Plan (A&R Plan) at least six (6) months prior to abandoning facilities and the construction of new facilities to replace exiting ones”.

An A&R Plan will be needed for the closed landfill site.

Gardner Lee Limited has been retained to prepare an A&R Plan for the facility. A Draft A&R Plan is scheduled to be completed by mid-October 2008 and will be provided to Nuna Burnside.

It is our understanding the A&R Plan would include:

- As-built plans and as-existing conditions
- Historical review of filling and estimates of waste volumes
- Identification of items out of compliance with the current license

- Preparation of an abandonment and restoration plan including:
 - Cap and cover design
 - Surface drainage and contouring
 - Potential environmental impacts
 - Long term monitoring and inspection plan
 - Layout of monitoring stations and post closure sampling program (may coincide with current license requirements)
 - Recommended landuse planning set backs and landuse designation as a closed landfill and future landuse
 - Contingency plan
 - Closure schedule.

The Draft A&R Plan will be submitted in support of the license application, and following approval of the Draft a Final Version will be submitted by March 31, 2009.

Construction to implement the A&R Plan is tentatively scheduled for the summer of 2009 providing approvals are in place to begin work.

2.2.2 New Landfill Site

The newly constructed landfill is scheduled to being operations in the late fall of 2008. The new landfill site component of the submission will include;

- As-built drawings
- Operation and Maintenance Plan including:
 - Staged filling of waste cells
 - Locations of monitoring wells and surface water sampling points
 - Staged closure process as the site fills
 - Household hazardous waste and storage of waste oil
 - Bulky metals and materials segregation
 - Recycling and reuse areas
 - General outline of Abandonment Restoration Plan
 - Hazardous waste storage and disposal
- Monitoring Program and QA/QC Control Plan including:
 - Surveillance network
 - Sampling
 - Annual reporting
- Environmental Emergency Contingency Plan
- Identification of items that are out of compliance with NWB requirements and recommendations to bring the site into compliance.

Since the site has not yet been commissioned, no annual reports are required at this time, however as part of the field program, samples will be collected from each monitoring location and an abbreviated report of background conditions will be submitted as an annual report. This will be considered the benchmark for future comparisons of impact.

As noted previously, any items requiring engineering design and construction to achieve compliance will be noted. A timeline to prepare engineering designs and carryout the construction will be included and would be expected as "Conditions" in the license.

2.2.3 Landfarm

A landfarm for the treatment of hydrocarbon impacted soil was designed by Dillon Consulting Ltd. a number of years ago. Dillon has reportedly sampled the site on occasion since it was constructed. It was never licensed. The GN reportedly does not have as-built drawings, O&M documents, or other material regarding the site.

It is our understanding from the NWB that all licensable items should be included on as few licenses as possible for each Hamlet. That the landfarm has been in use for several years and needs to be included in the license. The following information and supporting documents need to be included in the submission:

- As-built drawings
- Operation and Maintenance Plan including:
 - Site operations and methodology
 - Locations of monitoring wells and surface water sampling points
- Monitoring Program and QA/QC/Plan including:
 - Surveillance Network
 - Sampling
 - Annual reporting
- Environmental Emergency Contingency Plan
- Identification of items out of compliance with NWB requirements and recommended plan to achieve compliance.

The guidance document Code of Practice for Land Treatment of Soil Containing Hydrocarbons, Alberta Environment, 2005, and guidelines for other jurisdictions will be used for operations guidance.

If the landfarm is full, then the process should proceed directly to abandonment and restoration. An Abandonment and Restoration Plan will be required for submission to the NWB for approval prior to conducting the actual closure.

At this time we will make the submission based on the site remaining in operation.

Once the soil in the landfarm meets the regulatory criteria, it can be removed and the site reused when needed, or the site can be closed. At this time we will assume the site will remain in active remediation mode. A 2005 monitoring report will be prepared for submission.

2.3 Preparation of NWB Water License Application – CGS, GN Infrastructure

2.3.1 Sewage Treatment Plant

The Rankin Inlet Sewage Treatment Plant is operated by CGS-GN on behalf of the Hamlet, and until recently operated under License # NWB3GRA0207.

The plant provides partial treatment, with a rotating drum screen with the partially treated effluent being discharged to the off shore marine environment. Although the plant was previously licensed, it is unlikely to be in compliance with NWB requirements in its current condition. The GN has been studying options for upgrading and/or replacement. No final discussion has been made. For purposes of this plan and the NWB License application, the current condition of the plant will be documented and the out of compliance items noted. A plan and time line to achieve compliance will be provided with the submission, which can be made as a “Condition” of the new license. At this time, the GN has indicated the engineering studies to support a decision on the exact technology/methodology to achieve compliance will not be completed until mid-2009.

2.3.2 Water Intake System

The water intake system and how it impacts the environment through the process of water taking is the mandate of the NWB.

The NWB mandate does not include the treatment, distribution, or final quality of the water. The water intake system has expanded. FSC Architects and Engineers is reportedly conducting upgrades. As built drawings and sampling data will be compiled and updated for the submission. An Annual Report for 2008 will be prepared to meet license compliance requirements.

2.3.3 Utilador

Rankin Inlet is serviced with a sewage and water utilador system. The utilador network, and infrastructure outline and operation, will be updated and documented.

The utilidor is a support infrastructure for the Sewage Treatment Plant and Water Supply Intake, and will be included under their respective monitoring programs, O&M Plans, and spill contingency plans, etc.

2.4 Annual Reports

It is our understanding that annual reports have not been submitted as required by the expired licenses. Recent conversations with NWB staff have indicated that the proponent's (Hamlet and/or CGS-GC) past performance with meeting the compliance terms of the licenses, will influence the terms and conditions imposed on a new license. The NWB has indicated that it will be their policy when issuing a new license to reduce the license period from 5 years to 2 years, or other conditions in an attempt to motivate proponents to meet the compliance terms of the license. Further non-compliance would result in license revocation or non-renewal.

Annual Reports are required for:

- Sewage Treatment System
- Water Intake System
- Utilidor (included with the Sewage and Water Systems)
- Closed Landfill
- New Landfill (background monitoring)
- Landfarm (although not specifically listed on previous licenses submitting an annual report would demonstrate due diligence).

As a demonstration of the Hamlet's and CGS-GN efforts to achieve compliance, we recommend preparing annual reports for 2008 for each item. These annual reports should be submitted with the application to demonstrate the proponents efforts to meet the Terms and Conditions of the both the historic licenses and the new licence applications.

This should assist in the process of renewing the licence with the least amount of restrictive conditions.

2.5 Nunavut Water Board Liaison

The plan outlined is based on our current understanding of NWB requirements, and the responses received regarding the most recent Nuna Burnside technical submissions to the NWB. It is expected that the NWB will have questions, and request clarification and edits to the submissions.

It is also recognized that some aspects of the physical infrastructure (Sewage Treatment Plant) will be out of compliance with NWB requirements, or will require additional specific studies to achieve compliance, such as environmental impact studies, watershed hydrologic studies, etc. These are beyond the scope of this work. Out of compliance issues will be noted, and a workplan and timeline developed to address these issues. NWB liaison work will be limited to the effort of the submission of the infrastructure in its current condition and a proposed plan and timeline to achieve compliance.

3.0 Schedule

The following is the anticipated schedule based on the plan described above:

- Approval to begin work – August 2008
- Field visit and data collection including sampling and surveying – September 2008
- Preparation of data for NWB License submissions – October 2008
- Submission of NWB License applications – November 2008
- Addressing “Conditions” in Licences – as per “Conditions”.

If you have any questions or comments, please contact the undersigned.

Yours truly,

Nuna Burnside Engineering and Environmental Ltd.



Jim Walls, P.Geol.

cc: Mr. Gerry Popowich, Nuna Burnside – Winnipeg Office

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