

Elaine Briere - MVLWB

From: Shannon Hayden - MVLWB [shayden@mvlwb.com]
Sent: Tuesday, December 01, 2009 1:10 PM
To: permits@mvlwb.com
Subject: FW: INAC Intervention - Hay River Water Licence
Attachments: INAC Intervention - December 2009.pdf

For the registry please
MV2009L3-0005

-----Original Message-----

From: Catherine Mallet [mailto:Catherine.Mallet@inac-ainc.gc.ca]
Sent: Tuesday, December 01, 2009 10:47 AM
To: shayden@mvlwb.com
Cc: Jeanne Arsenault; Rob-NWT Walker; Robert Jenkins; Wayne Starling
Subject: INAC Intervention - Hay River Water Licence

Shannon,
See attached INAC Intervention for the Hay River Water Licence application.
Sincerely,
Catherine

Catherine Mallet
Regulatory and Science Advisor
Water Resources Division
Indian and Northern Affairs Canada
P.O. Box 1500
Yellowknife, NT
X1A 2C5
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Indian and Northern
Affairs Canada

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et du Nord Canada

3rd Floor Bellanca Building
PO Box 1500
Yellowknife, NT
X1A 2R3

File: MV2009L3-0005

December 2nd 2009

To: Shannon Hayden
Regulatory Officer
Mackenzie Valley Land and Water Board
P.O. Box 2130
Yellowknife, NT X1A 2P6

SEND BY FAX: (867) 873-6610

**RE: MUNICIPAL CORPORATION OF THE TOWN OF HAY RIVER – TYPE A
WATER LICENCE RENEWAL APPLICATION MV2009L3-0005**

Dear Ms. Hayden,

Please see the enclosed Intervention from Indian and Northern Affairs Canada for the Town of Hay River water licence application MV2009L3-0005. If you have any questions, please contact Ms. Catherine Mallet at Catherine.Mallet@inac.gc.ca or 669-2402.

Sincerely,

Teresa Joudrie
Director, Renewable Resources and Environment
Indian and Northern Affairs Canada

**INDIAN AND NORTHERN AFFAIRS CANADA
INTERVENTION
FOR THE
TOWN OF HAY RIVER
WATER LICENCE APPLICATION
MV2009L3-0005**

Submitted to:
Mackenzie Valley Land and Water Board
PO Box 2130
Yellowknife, NT X1A 2P6
December 2nd, 2009

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LIST OF ACRONYMS

BOD – Biological Oxygen Demand

CBOD – Carbonaceous Biological Oxygen Demand

CCME – Canadian Council of the Ministers of the Environment

CRP – Closure and Reclamation Plan

INAC – Indian and Northern Affairs Canada

MVLWB – Mackenzie Valley Land and Water Board

SNP – Surveillance Network Program

TSS – Total Suspended Solids

SUMMARY OF RECOMMENDATIONS

WATER LICENCE CONDITIONS

RECOMMENDATION #1

Indian and Northern Affairs Canada recommends that in Part A: Scope & Definitions, Sewage Disposal Facilities should be changed to “comprises facilities as defined in UMA Engineering Drawing #00-CM1003 on page 27 of the Renewal Application package.” A copy of the Drawing should be attached to the Water Licence.

RECOMMENDATION #2

Indian and Northern Affairs Canada recommends that in Part D: Waste Disposal, the wording of Condition 1 should be updated to reflect new sewage lagoons constructed in 2007. INAC suggests the following wording “The Licensee shall direct all sewage flow from the Town through the sewage lagoons as identified in the Renewal Application Drawing #00-CM1003 and then to Great Slave Lake via wetland discharge.”

RECOMMENDATION #3

Indian and Northern Affairs Canada recommends that the INAC Inspector be notified prior to the removal of one treatment cell from service, and that approval of the INAC Inspector be required prior to the removal of more than one treatment cell from service for the purposes of conducting maintenance activities.

RECOMMENDATION #4

Indian and Northern Affairs Canada recommends that the snow disposal plan should be reviewed annually and any revisions shall be identified in the Annual Report.

RECOMMENDATION #5

Indian and Northern Affairs Canada recommends that Condition 1, Part I should refer to INAC’s “Guidelines for Spill Contingency Planning” April 2007.

RECOMMENDATION #6

Indian and Northern Affairs Canada recommends that the Operations and Maintenance Plan be reviewed annually and any revisions should be submitted to the Board for review and approval as described in Part H, Condition 3.

WASTEWATER MANAGEMENT

RECOMMENDATION #7: *INAC Recommends that CBOD be added to the list of parameters sampled at SNP 0053-2 in Part B, Section 1 of the current water licence, for a minimum period of 3 years. After the 3 year period, the Town should provide a trend analysis to the Board for review and approval, and sampling requirements should be revisited.*

RECOMMENDATION #8

INAC recommends that the frequency of sampling contained in Part B, Section 8 of the Surveillance Network Program be changed to twice annually, to occur in the spring and fall months.

SOLID WASTE FACILITY

RECOMMENDATION #9

Indian and Northern Affairs Canada recommends all groundwater monitoring analyses conducted at the Solid Waste Disposal Facility be submitted annually to the Board within the Water Licence Annual Report.

RECOMMENDATION #10: *INAC recommends that the Town update its Operation and Maintenance Manual to include operations from the Hydrocarbon Biopile Treatment Facility. The Plan should include how the Town will manage future increases in soil volume, how leachate will be tested and analyzed, how results will be reported, and how leachate will be discharged or stored.*

RECOMMENDATION #11: *INAC recommends that all sampling results of leachate from the Hydrocarbon Biopile Treatment Facility be reported within the Water Licence Annual Report.*

RECOMMENDATION #12

Indian and Northern Affairs Canada recommends that the Town submits a Closure and Reclamation Plan for review and approval by the Board.

1.0 INTRODUCTION

The following concerns and issues have resulted from Indian and Northern Affairs Canada (INAC) reviews of the Type A Water Licence and attached plans. This intervention submission explains INAC's concerns and provides information and recommendations for the consideration of the Mackenzie Valley Land and Water Board (MVLWB) during its decision-making process associated with application MV2009L3-0005. INAC appreciates the opportunity to express its concerns and make recommendations to the MVLWB on this application.

2.0 WATER LICENCE CONDITIONS

The following section outlines INAC's recommendations with respect to Terms and Conditions which should be contained within the Type "A" Water Licence issued to the Town of Hay River (Town). INAC recommends that the conditions in the existing licence remain the same with the exception of the following proposed revisions:

SEWAGE DISPOSAL FACILITIES

INAC believes that the following two recommendations will provide clarity within the water licence with respect to Terms and Conditions applying to the Town of Hay River's sewage treatment facilities.

RECOMMENDATION #1

Indian and Northern Affairs Canada recommends that in Part A: Scope & Definitions, Sewage Disposal Facilities should be changed to "comprises facilities as defined in UMA Engineering Drawing #00-CM1003 on page 27 of the Renewal Application package." A copy of the Drawing should be attached to the Water Licence.

RECOMMENDATION #2

Indian and Northern Affairs Canada recommends that in Part D: Waste Disposal, the wording of Condition 1 should be updated to reflect new sewage lagoons constructed in 2007. INAC suggests the following wording "The Licensee shall direct all sewage flow from the Town through the sewage lagoons as identified in the Renewal Application Drawing #00-CM1003 and then to Great Slave Lake via wetland discharge."

SEWAGE LAGOON MAINTENANCE

The Town of Hay River currently performs maintenance on its sewage lagoon periodically and on an as-needed basis. It is INAC's understanding that the Town only removes one cell of the lagoon from service during such maintenance, leaving three cells in operation for sewage treatment. Removing more than one cell at a time would result in a reduction in wastewater treatment capacity. INAC recommends that the INAC Inspector be notified of maintenance activities to be conducted at the sewage lagoon. Notification should occur prior to the removal of any one cell from service. Such notification would allow the INAC Inspector to remain informed of site activities, as well as provide knowledgeable feedback to the Town on their proposed maintenance activities. However, should more than one cell be removed from service for maintenance activities, approval of the INAC Inspector should be required as this potentially represents a significant reduction in treatment capacity at the sewage lagoon.

RECOMMENDATION #3

Indian and Northern Affairs Canada recommends that the INAC Inspector be notified prior to the removal of one treatment cell from service, and that approval of the INAC

Inspector be required prior to the removal of more than one treatment cell from service for the purposes of conducting maintenance activities.

SNOW REMOVAL PLAN

The Town of Hay River currently prepares a Snow Disposal Plan. INAC recommends that this Plan be reviewed yearly and any revisions be identified in the Annual Report. INAC understands that the Town has agreed to conduct an annual review.

RECOMMENDATION #4

Indian and Northern Affairs Canada recommends that the snow disposal plan should be reviewed annually and any revisions shall be identified in the Annual Report.

SPILL REPORTING/SPILL CONTINGENCY PLANNING

In April 2007, INAC released its Guidelines for Spill Contingency Planning. The guidelines are intended to help minimize the impacts of spills of petroleum products and other hazardous materials by establishing a predetermined line of response and action plan. At the technical session held on November 12th, 2009, the Town demonstrated appreciation and interest for the importance of following those guidelines. An electronic copy of the Guidelines was subsequently forwarded to the Town. Additional copies of the Guidelines can be obtained from the Water Resources Division by contacting Chelsea Janz at 867-669-2564 or Chelsea.Janz@inac.gc.ca. Indian and Northern Affairs Canada recommends that Condition 1, Part I should refer to INAC's "Guidelines for Spill Contingency Planning" April 2007.

RECOMMENDATION #5

Indian and Northern Affairs Canada recommends that Condition 1, Part I should refer to INAC's "Guidelines for Spill Contingency Planning" April 2007.

OPERATIONS AND MAINTENANCE PLAN

Currently, there exists a requirement for the Town of Hay River to submit an Operations and Maintenance Plan to the MVLWB for review and Approval. INAC recommends that this condition remain in the renewal licence and that the Plan be reviewed yearly and any revisions to the Plan be provided to the Board for review and approval.

RECOMMENDATION #6

Indian and Northern Affairs Canada recommends that the Operations and Maintenance Plan be reviewed annually and any revisions should be submitted to the Board for review and approval as described in Part H, Condition 3.

3.0 WASTEWATER MANAGEMENT

SNP SAMPLING - CBOD ANALYSIS

The Town currently tests for BOD at *SNP 0053-2*. Currently, the CCME Municipal Wastewater Strategy for the Treatment of Municipal Wastewater Effluent uses CBOD as an indicator for the quality of municipal wastewater. INAC recommends that both parameters be sampled for a specified period of time within the renewed water licence. This would maintain the existing long-term BOD dataset collected by the Town, but also have a period of overlap with CBOD analysis, which would provide information relevant to the upcoming CCME requirements, as well as provide a relationship to the long-term BOD dataset. INAC believes CBOD and BOD should be tested for a minimum of 3 years in order to achieve such a relationship. After 3 years, it is recommended that the Town provides a trend analysis of the data collected for review and approval by the Board. At that time, the sampling requirements could be revisited.

RECOMMENDATION #7: *INAC Recommends that CBOD be added to the list of parameters sampled at SNP 0053-2 in Part B, Section 1 of the current water licence, for a minimum period of 3 years. After the 3 year period, the Town should provide a trend analysis to the Board for review and approval, and sampling requirements should be revisited.*

SNP SAMPLING - BIOASSAY ANALYSIS

Under the current water licence, SNP Part B, Item 2 states that: “The samples of whole effluent shall be provided to the Environmental Protection Division of Environment Canada for the purpose of performing a static LC50 bioassay for both rainbow trout and *Daphnia magna*.” Bioassay testing, if conducted properly using standardized protocols and using a representative sample of the effluent, provides valuable information on the toxicity of the effluent. It is also useful in evaluating the appropriateness of associated effluent quality criteria. However, INAC believes that the frequency of the Bioassay sampling, as defined in Condition 2, to be excessive. Although INAC recognizes the purpose and importance of bioassay testing to indicate the toxicity of the effluent on living organisms, INAC recommends that the frequency of such testing be reduced to twice annually. Further, INAC recommends that such sampling occur in the spring and fall periods.

RECOMMENDATION #8

INAC recommends that the frequency of sampling contained in Part B, Section 2 of the Surveillance Network Program be changed to twice annually, to occur in the spring and fall months.

3.0 SOLID WASTE DISPOSAL FACILITY

GROUNDWATER/LEACHATE MONITORING

It is INAC's understanding that the Town currently has groundwater monitoring wells in place to characterize the subsurface drainage patterns at the Solid Waste Facility. INAC is pleased that such monitoring stations have been installed and maintained by the Town. Monitoring of groundwater at the site will provide valuable information on subsurface drainage patterns and quality of leachate, information imperative to proper management and future closure of the facility.

RECOMMENDATION #9

Indian and Northern Affairs Canada recommends all groundwater monitoring analyses conducted at the Solid Waste Disposal Facility be submitted annually to the Board within the Water Licence Annual Report.

HYDROCARBON BIOPILE TREATMENT FACILITY

At the November technical sessions held by the MVLWB, it was indicated by the Town that in order to respond to the current volume of contaminated soils received at the Solid Waste Disposal Facility, the thickness of the hydrocarbon biopile had to be increased. In turn, this would potentially lengthen the time required to provide adequate treatment within the biopile.

The Town is currently operating a contaminated soil treatment facility. It was confirmed during the technical sessions that leachate was being collected and reapplied to the pile if quality did not meet acceptable criteria for discharge. INAC recommends that the Town update its Operation and Maintenance Manual to include operations from the Hydrocarbon Biopile Treatment Facility. The Plan should include how the Town will manage future increases in contaminated soil volume, how leachate will be tested and analyzed, how results will be reported, and how leachate will be discharged or stored. INAC also recommends that all sampling results of leachate from the Hydrocarbon Biopile Treatment Facility be reported within the Water Licence Annual Report.

RECOMMENDATION #10: *INAC recommends that the Town update its Operation and Maintenance Manual to include operations from the Hydrocarbon Biopile Treatment Facility. The Plan should include how the Town will manage future increases in soil volume, how leachate will be tested and analyzed, how results will be reported, and how leachate will be discharged or stored.*

RECOMMENDATION #11: *INAC recommends that all sampling results of leachate from the Hydrocarbon Biopile Treatment Facility be reported within the Water Licence Annual Report.*

CLOSURE AND RECLAMATION PLAN

INAC believes that the development of a Closure and Reclamation Plan is an important aspect of any undertaking. Throughout the lifespan of a project, there are three stages of development of a Closure and Reclamation Plan:

- Preliminary Closure and Reclamation Plan (Conceptual CRP)
- Interim Closure and Reclamation Plan
- Final Closure and Reclamation Plan

A preliminary CRP is generally prepared in conjunction with planning and permitting. The general purpose is to demonstrate how the site is to be reclaimed and to describe likely residual risks to human health and the environment.

Several interim CRPs are typically prepared during the life of a project. Interim CRPs are prepared on a regular basis, and may coincide with changes to the project plan, or key milestones during the life of the project. Interim CRPs would include updates based on information collected during reclamation research activities. The general purpose of interim CRPs is to update preceding plans according to the current project plan, changes in community values, or advances in technology. Interim plans contain conceptual detail on reclamation of components that will not be closed until the end of project operations, as well as operational detail for components which will be progressively reclaimed earlier in project life.

The final CRP should be prepared and approved prior to a scheduled permanent closure or immediately after an unplanned closure. This version of the CRP is to contain detailed information on the reclamation activities that will be undertaken at the site.

INAC recommends that the Town be required to develop a Closure and Reclamation Plan for the Solid Waste Disposal Facility. This Plan should be a requirement of the water licence and be submitted to the MVLWB for review and approval.

RECOMMENDATION #12

Indian and Northern Affairs Canada recommends that the Town submits a Closure and Reclamation Plan for review and approval by the Board.

REFERENCES

Application for the Town of Hay River Water Licence, found on the MVLWB web site:
<http://www.mvlwb.ca/mv/reg.aspx?app=MV2009L3-0005>

Guidelines for Spill Contingency Planning, INAC April 2007, found on the Water Resources Division web site: <http://www.ainc-inac.gc.ca/ai/scr/nt/ntr/pubs/SCP-eng.asp>