



Mackenzie Valley Land and Water Board
7th Floor - 4910 50th Avenue
P.O. Box 2130
YELLOWKNIFE NT X1A 2P6
Phone (867) 669-0506
FAX (867) 873-6610

Staff Report

Applicant: Town of Hay River	
Location: Town of Hay River, NT	Application: MV2009L3-0005
Date Prepared: March 23, 2010	Meeting Date: April 1, 2010
Subject: Renewal of Type A Water Licence	

1. Purpose/Report Summary

To obtain a board decision on the Type A Water Licence Renewal Application submitted by the Town of Hay River (the Town) to continue to use water and dispose of waste for municipal purposes in the Town.

2. Background

- June 11, 2009 – WL Renewal Application submitted;
- July 3, 2009 – WL Renewal Application deemed incomplete;
- July 27, 2009 –supplemental information submitted;
- July 27, 2009 – WL Renewal Application deemed complete and sent out for review with a comment deadline of October 7, 2009. The draft Work Plan and the preliminary screening exemption matter was sent out for review with a comment deadline of August 12, 2009;
- August 12, 2009 – comment deadline on the draft Work Plan and preliminary screening exemption matter;
- October 7, 2009 – comment deadline on the WL Application;
- October 22, 2009 – Board approves draft Work Plan;
- November 5, 2009 – Board exempts WL Application from preliminary screening;
- November 13, 2009 – technical session held;
- November 23, 2009 – public hearing ad appears in News/North;
- December 2, 2009 – intervention due date;
- December 7, 2009 – Proponent response to interventions;
- December 20, 2009 – Town of Hay River requests public hearing cancellation;

- January 7, 2010 – update on file presented to the Board;
- January 11, 2010 – pre-hearing conference;
- January 26, 2010 – pre-hearing brief and public hearing held;
- January 27, 2010 – post-hearing debrief;
- February 17, 2010 – draft WL circulated for review and comment;
- March 9, 2010 - comment deadline for review of draft WL; and
- March 25, 2010 – draft WL presented to the Board.

3. Discussion

Staff received comments on the draft WL from Indian and Northern Affairs Canada (INAC), the Town of Hay River (the Town), Government of the Northwest Territories Environment and Natural Resources (GNWT-ENR), and Environment Canada (EC).

This Water Licence for the Town is being prepared in conjunction with the City of Yellowknife Water Licence. Staff met with the Board previously to discuss some outstanding issues in the development of the drafts presented today, April 1, 2010.

4. Comments

Because it is not known when the Minister will approve and sign the Water Licence, the date of May 31, 2010 has been used as a temporary measure for the Water Licence Issuance Letter, Cover Page, and Surveillance Network Program. May 31, 2010 marks the current licence expiry date. If the Minister approves and signs the Water Licence prior to this date, the date on the documents will be changed accordingly.

5. Reviewer Comments

The attached Review Comment Summary Table contains the comments that were received from reviewers on the application and draft WL and how the comments, if applicable, were incorporated into the draft WL presented today, April 1, 2010.

6. Security

No security required for this operation.

7. Conclusion

Board staff has considered the Water Licence Application, interventions, and comments submitted during the licencing process and notes that the proposed conditions in the draft WL should mitigate potential environmental impacts.

8. Recommendation

Staff recommends that the Board issue the Type A Water Licence with the associated Reasons for Decision and proposed conditions.

Staff recommends that the Water Licence has an expiry date of May 30, 2020.

9. Attachments

- 2004 Preliminary Screening
- Application Review Comment Summary Table
- Draft WL Review Comment Summary Table
- Draft Type A Water Licence Issuance Letter
- Draft Type A Water Licence Cover Page
- Draft Type A Water Licence Conditions, Schedules, and Surveillance Network Program
- Draft Reasons for Decision
- Draft Letter to the Minister
- General Procedures

Respectfully submitted,



Shannon Hayden
Regulatory Officer

Reviewer Comments – Town of Hay River Water Licence MV2009L3-0005

Reviewer	Comment	Mitigation
<p>Rick Walbourne, Habitat Biologist, DFO</p>	<p>Excerpt from DFO comments:</p> <p>To reduce potential impacts to fish and fish habitat we are recommending the following mitigation measures be included into the proposed plans:</p> <ol style="list-style-type: none"> 1. Water intakes should be properly screened and be equipped with fine mesh of 2.54 mm (1/10") to prevent the entrainment and/or impingement of fish. <p>Provided that the additional mitigation measures described above continued to be incorporated into the proposed activity, DFO can conclude that the proposal is not likely to result in impacts to fish and fish habitat.</p> <p>Excerpt from DFO comments:</p> <p>Page 19, under Section 8.3 of the "Mackenzie Valley Land and Water Body Questionnaire" [states] that <i>approval has been gained or sought from the Department of Fisheries and Oceans for using any fish-bearing water bodies for containment or disposal of wastes</i>. This statement implies that approval has been sought and received for the proposed activities. However, it is our understanding that this question pertains to Tailings Impoundment Areas under the <i>Metal Mining Effluent Regulations</i>, for which DFO and Environment Canada would have joint responsibilities. This would be applicable for a Water Licence relating to the containment of mine-related waste and not that of a municipal Water Licence. From discussions with Land and Water Board personnel, we understand that the Land and Water Board working groups on "Standard Procedures and Consistency" will review the inclusion of this statement in the questionnaire.</p>	<p>Water intakes properly screened and equipped with fine mesh of 2.54 mm (1/10") to prevent the entrainment and/or impingement of fish.</p> <p>Note from DFO:</p> <p>No response from the Town of Hay River is required by our Department. There has been some discussion with the proponent and several Land and Water Board staff regarding the wording on the LWB questionnaire. We require no further clarification on that aspect of the letter.</p>

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
<p>Patrick Clancy, Environmental Assessment Analyst, GNWT-ENR</p>	<p>Excerpts from ENR's comments:</p> <p>General Concerns – Water Licence Scope</p> <p>It is unclear to ENR if the scope of current Water Licence Application is for the use of the existing Solid Waste Disposal Facility or whether or not the new application is applying for a new location for a Solid Waste Disposal site. ENR notes that no information is provided with respect to the lifespan of the site; therefore, ENR assumes this information is unknown... Subsequently, ENR provides the following information requests:</p> <ol style="list-style-type: none"> 1. Is the intent of the current Water Licence renewal to maintain and operate the existing Solid Waste Disposal Site for the duration that the licence granted? 2. If the answer to question (1) is yes, then please provide information that demonstrates the proposed Water Licence Term is consistent with the projected lifespan of the current site. 3. If the answer to question (1) is no, then please demonstrate that potential new locations for a new Solid Waste Disposal Site have been proposed and identified for consideration. <p>Project Specific Concerns – Additional Studies</p> <ol style="list-style-type: none"> 1. It is the understanding of ENR that the lifespan and remaining capacity of the Solid Waste Disposal Facility is unknown. ENR is concerned that the solid waste disposal requirements of the Town could be compromised in the future should the site unexpectedly reach capacity. 	<p>Developing a Community Hazardous Waste Management Plan, which ENR recommends for use by the Proponent as a guidance document to aid in developing a Hazardous Waste Management Plan.</p> <p>Summarized from Hay River's response:</p> <p>Yes, for as long as possible.</p> <p>Current RFP to study ways to extend the lifespan of the current site.</p>

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
	<p>Project Specific Concerns – Closure and Reclamation</p> <p>1. ENR is concerned that if study shows that the Solid Waste Disposal Facility is relatively close to reaching capacity, a Closure and Reclamation Plan must be developed in a timely and approved manner, otherwise avoidable adverse environmental impacts may occur.</p> <p>Project Specific Concerns – Waste Segregation</p> <p>1. ENR notes there is poor waste segregation at the dump and poor signage.</p> <p>Project Specific Concerns – Wildlife, Windblown Debris, and Unauthorized Access</p> <p>1. There are serious issues with bear attraction and habituation at the Solid Waste Disposal Facility, especially in the Hazardous Waste Storage Area</p> <p>2. An ENR site visit noted large quantities of unauthorized waste being deposited in the municipal/household solid waste area, mainly non-segregated construction and demolition waste. Hazardous materials were observed amongst the construction and demolition waste.</p> <p>3. An ENR site visit also noted issues with windblown debris</p>	<p>There is no A&R Plan to include, an oversight in editing. The Town will submit a plan if it is determined that the site is to be closed during the life of the Permit.</p>

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
	<p>Project Specific Concerns – Timely Disposal of Municipal Solid Waste</p> <ol style="list-style-type: none"> An ENR site visit in September 2009, noted extensive volumes of municipal (household) solid waste that had not been properly maintained, covered or disposed of in a timely manner. <p>Project Specific Concerns – Proper Recovery, Storage and Timely Shipment of Hazardous Wastes for Disposal</p> <ol style="list-style-type: none"> An ENR site visit in September 2009 noted improper segregation and storage of various hazardous wastes, spills and evidence of animal scavenging within the Hazardous Waste Area. In addition, during the September 2009 site visit, ENR noted a stockpile of appliances in the waste stream (refrigerators containing Ozone Depleting Substances (ODS)) that had not had ODS recovered from them. Many of the appliances were damaged, whereby hazardous substances contained within have the potential to be released to the receiving environment. <p>Recommended Terms or Conditions:</p> <ul style="list-style-type: none"> It is assumed that a projected lifespan study has not been completed; therefore, ENR recommends that the Proponent undertake studies to determine the remaining capacity and the projected lifespan of the Solid Waste Disposal Facility. Further to this, that these studies be submitted to the Board for review and approval by a Technical Advisory Committee. 	

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
	<ul style="list-style-type: none"> • ENR recommends that the Proponent provide the previously discussed Closure and Reclamation Plan. • The Licensee shall erect signage identifying the locations of the Ex-filtration lagoon and associated wetland areas, Municipal Solid Waste Trenches, Segregated Waste Areas (including Hazardous Waste and Contaminated Soil Remediation areas), and Recyclable Waste Areas. The signage will be located and maintained to the satisfaction of the Water Licence Inspector and the Board. • The Licensee shall create and maintain waste segregation areas to the satisfaction of the Board and the Water Licence Inspector for: <ol style="list-style-type: none"> 1. Municipal Solid Waste 2. Household Hazardous Wastes 3. Soil Remediation Facility 4. Bulky waste (including ODS recovered appliances, tires) and scrap metal 5. Construction/Wood Waste 6. Recyclable material area • The Licensee shall update signage at the gated entrance of the Solid Waste Facility to reflect hours of operation noted in section 3.1 of the <i>Operation and Maintenance Plan for the Town of Hay River</i> as the current signage does not reflect hours of operation quoted in this plan. • The Licensee shall erect and maintain, to the satisfaction of the Water Licence Inspector, permanent fencing surrounding the current Ex-filtration lagoon. 	<p>MSW: Suggests this is outside the MVLWB's jurisdiction. Will take under advisement.</p> <p>Fencing: Suggests this is outside the MVLWB's jurisdiction. Will take under advisement.</p>

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
	<ul style="list-style-type: none"> • The Licensee shall erect and maintain, to the satisfaction of the Water Licence Inspector, fencing around the perimeter of the Solid and Sewage Waste Disposal Facility that is capable of deterring wildlife and unauthorized personnel from entering this site. • The Licensee shall erect and maintain, to the satisfaction of the Water Licence Inspector, appropriate fencing around the perimeter of the Hazardous Waste Storage Area that is capable of deterring wildlife and unauthorized personnel from entering this site. • The Licensee shall erect and maintain, to the satisfaction of the Water Licence Inspector, fencing around the perimeter of the Soil Remediation Facility in order to delineate the boundaries of the lined area to ensure future contaminated soil deposits are contained within this area. • The Licensee shall erect and maintain, to the satisfaction of the Water Licence Inspector, waste capturing fencing or devices, capable of being relocated as necessary, to prevent the spread of windblown waste to the areas surrounding the Solid, Liquid and Sewage Waste Disposal Facility. • The Licensee shall maintain a gate at the entrance of the Solid and Sewage Waste Disposal Facility that is capable of being locked in order to regulate hours and prevent the entry of wildlife, and discourage unauthorized individuals from depositing unauthorized waste. • The Licensee shall maintain an attendant during facility open hours to guide facility users to appropriate waste segregation 	

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
	<p>areas, record waste deposits, and prevent to deposition of unauthorized wastes. If this is not a feasible option, then establishing a key retrieval system, where facility users must retrieve a key to the gate and note what materials they will be tipping, would be a suitable alternative.</p> <ul style="list-style-type: none"> • The Licensee shall practice more frequent cover and maintenance of solid waste disposal trenches to prevent wildlife from being attracted to odours and decrease windblown waste. • ENR recommends that the Proponent develop a site specific Hazardous Waste Management Plan that identifies hazardous materials that will be accepted at the Solid Waste Disposal Facility, and the procedures for their management. <p>The Hazardous Waste Management Plan should also include or address the following:</p> <ul style="list-style-type: none"> • The Licensee shall install and maintain appropriate storage, fencing and (gated) access to the Hazardous Waste storage area. <ul style="list-style-type: none"> ○ Storage of Hazardous Wastes should provide protection from the elements (shelter) and prevent animal scavenging. ○ ENR recommends lining the Hazardous Waste Storage Area with an impermeable liner to act as barrier for any potential future leaks or spills that may occur. <p>The Licensee shall keep and maintain inventory and records of accepted hazardous wastes, and ensure proper sorting, segregation and labelling of accepted wastes, and</p>	<p>Suggests this is outside the MVLWB's jurisdiction. Will take under advisement.</p> <p>Some aspects regulated by WSCC and GNWT.</p> <p>Suggests this is outside the MVLWB's jurisdiction. Will take under advisement.</p>

Reviewer Comments – Town of Hay River Water Licence MV2009L3-0005

Reviewer	Comment	Mitigation
<p>Carole Mills, Manager, Water Resources Division, INAC</p>	<ul style="list-style-type: none"> • The Licensee shall provide hazardous waste quantity volume thresholds for determination of waste shipment to off-site disposal facilities, or provide a shipping schedule to ensure accumulated waste is shipped in a timely manner. <p>In addition, the Licensee shall ensure that accepted appliances that contain ODS, have the ODS recovered by the appropriate authority or contractor (e.g. Refrigerators with ODS) prior to deposition in the waste stream.</p>	<p>Summarized from Hay River's response:</p> <p>Would like to participate.</p>
<p>Carole Mills, Manager, Water Resources Division, INAC</p>	<p>Summarized from INAC's comments:</p> <p>Provide color maps so the reviewers can differentiate the color legend.</p> <p>INAC and EC co-chair a Northern Research Working Group (NRWG) whose function is to help regulate Municipal Wastewater Effluent as part of the Canada-wide Strategy. Hay River should plan ahead with upcoming requirements of the strategy in mind – contact Catherine Mallet or Anne Wilson for more information.</p> <p>Excerpt from INAC's comments:</p> <p>INAC recommends that the conditions in the existing licence stay the same with the exception of a few revisions below:</p> <p>Part A: Scope and Definitions</p> <p>The definition of Sewage Disposal Facilities should be changed to "comprises facilities as defined in UMA Engineering drawing #00-CM1003 on page 27 of the <i>Renewal Application package</i>." A copy of the drawing should be attached to the WL.</p>	<p>Summarized from Hay River's response:</p> <p>Would like to participate.</p> <p>Taken under advisement.</p>

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
	<p>Part D: Waste Disposal</p> <p>New sewage lagoons were constructed in 2007 so the wording of Condition 1 should be updated to correspond with the present application, such as: The Licensee shall direct all sewage flow from the Town through the sewage lagoons as <i>identified in the Renewal Application drawing #00-CM1003</i> and then to Great Slave Lake via wetland discharge. With the approval of an Inspector, only two treatment cells may be taken out of operation for conducting maintenance work at any time.</p> <p>Condition 7 calls for a plan outlining areas used for snow removal...It is suggested that Condition be changed to: The snow disposal plan should be renewed yearly and any additions or deletions to areas used shall be identified in the Annual Report</p> <p>Condition 10 (spill reporting), is already included on Part B Condition 8. INAC recommends this condition be removed</p> <p>Part H: Operation and Maintenance</p> <p>The O&M Plan for the Waste Disposal Facilities referred to in Condition 1 was submitted with the present Renewal Application. It is recommended that this plan be submitted yearly and any revisions should be submitted to the Board for review and approval as described in Part H, Condition 3.</p> <p>Part I: Spill Contingency Planning</p> <p>Condition 1 should refer to INAC's new <i>Guidelines for Spill Contingency Planning</i> April 2007.</p>	<p>Typically, only one lagoon taken out of operation at a time. The Town does not believe Inspector permission should be required for maintenance but will agree to providing advisement, if necessary.</p> <p>Agree to an annual review.</p> <p>Agree to an annual review.</p> <p>Samples taken with compliance samples may</p>

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
	<p>Surveillance Network Program (SNP)</p> <p>INAC recommends that SNP 0053-3 be sampled twice yearly to monitor the effectiveness of the wetland treatment. Parameters to be tested should be the same as 0053-2 as described in Part B, Section 1 of the SNP.</p> <p>CBOD should be added to the list of parameters to be sampled for 0053-2 and 0053-3 in Part B, Section 1.</p> <p>Part B, Section 8 should be changed to once per year during the summer months and as requested by the Inspector.</p> <p>Other:</p> <p>INAC feels that the following conditions in the Hay River Water Licence are outside the scope of the <i>NWT Waters Act</i> or are not appropriate to be contained within a WL... INAC recommends that the Board revisit the wording of these terms and conditions:</p> <p>Part C Item 4: The Water intakes shall be equipped with a screen having a mesh size in accordance with DFO Guidelines</p> <p>SNP Part B Item 2: The sample 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 <i>Daphnia magna</i>.</p>	<p>lead to an erroneous and misleading determination of the efficiency of the wetlands. Such unit process analysis should be undertaken as part of a larger study undertaken by others (i.e. as a case study by EC for the MWWE CWS).</p> <p>Please clarify; there is no Part B, Section 8 in the current SNP.</p> <p>The Town believes that bioassay samples should not be part of the new WL as they will not be required under the new MWWE CWS for this facility.</p>

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
<p>Anne Wilson, Water Pollution Specialist, Environment Canada</p>	<p>Excerpts from EC comments:</p> <p>A number of the drawings included with the application are illegible. A map should be provided which shows all the Surveillance Network Programme station locations.</p> <p>Spill Contingency Plan: Appendix A Correct the contact number for EC to 867-669-4736 and 1-866-845-6037 for emergencies Appendix B Further guidance on the use of the classification should be given in the plan; it is not referenced in the body of the plan.</p> <p>Closure planning: The water licence application states in Section 6.5 that a copy of the abandonment and restoration plan is in the attached O&M plan, but this is missing. The wording of the licence is such that an A&R plan is not required until six months prior to abandoning any Waste Disposal Facilities.</p> <p>Operation and Maintenance Plan The plan does not provide a working reference for operators in that it states what will be done, but not operational details. There is an insufficient level of detail throughout.</p> <p>Section 2.2 Engineered treatment pad What specific materials are accepted for the pad? How is it operated and what testing is done to determine when treatment is sufficient?</p>	<p>Summarized from Hay River's response:</p> <p>Taken under advisement – ask for resubmission of maps.</p> <p>Will do so and provide in following submission.</p> <p>Taken under advisement.</p> <p>There is no A&R Plan to include, an oversight in editing.</p> <p>The O&M Plan is intended to provide information to the MVLWB and Inspector. It is not intended as a training document for employees.</p> <p>Section 2.5 and the current WL.</p>

**Reviewer Comments – Town of Hay River
Water Licence MV2009L3-0005**

Reviewer	Comment	Mitigation
	<p>Section 2.3 Leachate control pond How is leachate treated/disposed of?</p> <p>Section 3.2 what materials are recycled?</p> <p>Section 3.7 Hazardous Materials This section simply states that hazardous materials are separated and properly stored until shipped out for disposal. It would be helpful to have documentation of what is accepted, how it is handled and stored, where the MSDS are kept, spill planning, and training given to workers handling such materials.</p> <p>Section 4.7 Treatment of Contaminated Drainage This section states that leakage out of the solid waste facility will be tested for contaminants and if found suitable will be transported to the lagoon. How is this tested, and what is deemed suitable? How will leachate be stored in the meantime? The plan states that “if testing revealed toxic elements that were not suitable for treatment in the waste water system the effluent will be trucked to the soil remediation facility and sprayed over the containment area.” Depending on what the toxic elements are, this could contaminate soil and inhibit remediation processes. This section should clearly lay out what needs to be tested, and what would be done with each category of contaminated drainage.</p> <p>Section 4.8 Removal of Accumulated Sludge from the Lagoons How is it determined when sludge removal is required? When cells are closed for desludging, where does the sewage inflow go? Any water decanted should be of appropriate quality before being released to the wetlands, so testing should be identified, and alternative handling methods outlined.</p>	<p>Evaporation or pumped back onto the biopile.</p> <p>Liquor bottles. The Town questions how the MVLWB would use/regulate any further recycling information.</p> <p>WSCC, GNWT and Transport Canada regulations. The Town questions how the MVLWB would use/regulate any further recycling information.</p> <p>The Town samples leachate as required by the WL when present. Compare results to WL compliance values and GNWT guidelines. Does not accept hazardous materials that would result in dangerously toxic liquid.</p> <p>Cells are emptied when they are visually full, one at a time. Raw sewage is routed through remaining serviceable cells.</p>

Reviewer Comments – Town of Hay River Water Licence MV2009L3-0005

Reviewer	Comment	Mitigation
	<p>Section 4.10 QA/QC Plan This section only refers to the analytical laboratory, but should include quality control information on taking samples properly, handling of bottles to prevent contamination, sample handling, and documenting samples. The INAC 1996 guidelines may be helpful, and are attached.</p> <p>Section 4.11 Disposal of Sludge Sludge from the sludge lagoon is to be placed outside the lagoon edges to add to the soil mass. Testing should first be done to ensure there is no contaminant risk to human health or the environment. Also, will this alter drainage and access of equipment to the cells?</p> <p>Licence Terms and Conditions: Part D.2. Effluent quality requirements Acute toxicity: The licence requires that there is 100% survival of test organisms in the acute bioassay tests. EC recommends that this be amended to 90% to be consistent with the test protocol, which allows 10% mortality in control animals.</p> <p>Part D.6 The licence refers to a bagged toilet waste disposal facility, but it is my understanding this does not exist. If there are still honeybags in use, the O&M Plan should note how disposal is being managed.</p> <p>Surveillance Network Program (SNP) Condition B.1 Station Number 0053-2 The SNP requires the licensee to sample the wetlands outflow at commencement and monthly during periods of flow for analysis for a full suite of parameters. EC supports the frequency in the expiring licence at a minimum; this will be consistent with the</p>	<p>Taken under advisement.</p> <p>Taken under advisement.</p> <p>There are no honey bags.</p> <p>Since the northern portion of the CWS has not been adopted, compliance with these standards seems premature.</p>