



Mackenzie Valley Land and Water Board
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Staff Report

Applicant: GNWT - Department of Transportation	
Location: Yellowknife, NT	Application: MV2001L3-0012
Date Prepared: June 14, 2010	Meeting Date: June 24, 2010
Subject: Changes to the Water Licence Terms and Conditions and the attached Surveillance Network Program	

1. Purpose/Report Summary

The purpose of this report is to present to the Mackenzie Valley Land and Water Board (the Board) changes made to GNWT-Department of Transportation (GNWT-DOT) Water Licence (WL) based on the construction of the new Glycol Retention Facility.

2. Background

- December 14, 2001 – application for water licence (WL) submitted to the Board;
- June 13, 2002 – WL issued for a period of two years;
- June 11, 2004 – WL expiry;
- April 15, 2005 – WL renewal application received;
- September 7, 2005 – WL renewal issued for a period of five years;
- July 17, 2007 – request from GNWT-DOT to waive 60 notification period as per Part E of the WL to upgrade the Glycol Retention Facility (GRF);
- July 26, 2007 – the Board decided to waive the 60 day notification period to allow GNWT-DOT to upgrade the GRF;
- April 21, 2010 – request from GNWT-DOT to spray glycol contaminated water to the airport infield;
- April 29, 2010 – the Board denied the request made by GNWT-DOT;
- May 10, 2010 – request from GNWT-DOT to waive the 60 day notification period to allow GNWT-DOT to construct a new GRF;

- May 13, 2010 – the Board decided to waive the 60 day notification period as per Part E of the WL to construct a new GRF;
- June 7, 2010 – staff notified by GNWT - DOT that the construction of the facility is complete; and
- September 6, 2010 – WL expiry.

3. Discussion

On May 10, 2010 GNWT- DOT made the request to the Board to waive the 60 day notification period to allow immediate construction of a new 2,000,000L GRF.

On June 7, 2010 staff were notified that the construction of the new facility has been completed.

With the construction of the new GRF the Water Licence Terms and Conditions and the Surveillance Network Program (SNP) had to be expanded upon to incorporate the new monitoring stations and parameters.

Section 18 (b) of the *Northwest Territories Waters Act* states that the Board may “amend, for a specified term or otherwise, any condition of a licence.

- I. On the application of the licensee,
- II. To deal with a water shortage in any water management area, or
- III. In any other case where the amendment appears to the Board to be in the public interest;

Under section 18(b)(iii) the Board has full authority to change the conditions of the Water Licence along with the SNP.

The changes that have been made are as follows:

Terms and Conditions Part D Item 8

The Licensee shall request approval from the Inspector at least ten (10) days prior to initiating the discharge of water from the Glycol Retention Facility.

Approval must come from the Inspector to ensure that the discharge limits are met prior to the discharge.

Terms and Conditions Part D Item 9

Effluent Quality Criteria

All water or waste discharged from Surveillance Network Stations S1, GRF-1, and GRF-D shall not exceed 100 mg/L for glycol, the results are to

be submitted to the Inspector at least (10) days prior to initiating discharge from the identified stations.

The new discharge site (GRF-D) has been added to this condition to ensure that water or waste discharged from the GRF does not exceed 100mg/L for glycol.

SNP

Part B Item 4

Stations WELL 3, WELL 4, WELL 5, SEW 4, SEW 11, and MG1 shall be sampled weekly during periods of flow and analysed for the following:

*Propylene Glycol
Ethylene Glycol
Diethylene Glycol
Chemical Oxygen Demand*

It was noticed in the current WL that the monitoring stations located throughout the infield towards Long Lake did not require sampling for any type of glycol, which is why this sampling frequency and parameters were added. The wells will be sampled during periods of flow, if the ground water never ceases to flow monitoring will continue to track the migration of glycol if any.

Part B Item 7

Stations GRF-N, GRF-E, GRF-S, GRF-W and GRF-D shall be sampled weekly during periods of flow and analysed for the following:

*Propylene Glycol
Ethylene Glycol
Diethylene Glycol
Chemical Oxygen Demand*

All wells around the new GRF are going to be sampled to see if any glycol is migrating out of the GRF and what direction it could possibly be flowing. The wells will be sampled during periods of flow, if the ground water never ceases to flow monitoring will continue to track the migration of glycol if any.

4. Comments

Indian and Northern Affairs Canada (INAC) Water Licence Inspector Michael Martin provided the four new sampling locations around the GRF along with the new GRF discharge point.

5. Review Comments

n/a

6. Security

n/a

7. Conclusion

The INAC Inspector has reviewed the proposed changes to the WL and has made recommendations. The recommendations have been included in the WL.

8. Recommendation

Staff recommends that the Board approve the adjusted WL and SNP.

9. Attachments

- Draft Water Licence and SNP
- Notification of change to Water Licence letter
- Map identifying location of new SNP locations
- Map identifying new GRF location in relation to Old GRF location

Respectfully submitted,



SM
Tyree Mullaney
Regulatory Officer