GENIVAR

May 28, 2013

Project No: 061-12527-00
(Old Project No: 06-147-01)

Ms. Tracey Braun, M.Sc.
Director, Environmental Assessment and Licensing Branch
MANITOBA CONSERVATION AND WATER STEWARDSHIP
160-123 Main Street
Winnipeg, MB, R3C 1A5

Dear Ms. Braun:

RE: RIVERDALE COLONY LAGOON – CLIENT FILE NO: 1981.20
ALTERATION NOTIFICATION NO. 2 – LICENCE NO. 2868 R

On behalf of Riverdale Colony, we would like to apply for an alteration to the Environment Act Licence (EAL) No. 2868 R, issued October 19, 2012. This alteration notification is the second to date for this project. The first alteration correspondence was dated March 30, 2011.

We seek a revision to Clause 23e) which reads:

The Licencee shall not discharge effluent from the wastewater treatment lagoon where the total phosphorus content of the effluent is in excess of one milligram per litre;

We request the wording of Clause 23e) be changed to remove the phosphorus limit of 1 mg/L and replaced with using trickle discharge into the ditching as a nutrient reduction strategy for populations under 2,000, according to the Regulations.

Riverdale Colony will implement a nutrient reduction strategy consisting of trickle discharge. The estimated maximum Colony population is 150 and thus the proposed lagoon may be considered as a small wastewater treatment facility. The distance of the route from the discharge point of the proposed lagoon to the Whitemud River is approximately 3.2 kilometres. A trickle discharge extending

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from two to four weeks will allow the vegetation and the soil in the bottom of the discharge ditch and the field drain to absorb nutrients and reduce nutrient loads to surface waters. Treated effluent will be discharged from the isolated secondary cell if wastewater effluent quality meets licence requirements and at a rate that optimizes the opportunity for nutrients in the effluent to be assimilated in the discharge route prior to reaching the second order drain while not challenging the normal operation of the wastewater treatment lagoon.

A Riverdale Colony maximum design population of 150 will generate wastewater requiring an active storage capacity of approximately 8,513 m^3 for a period of 227 days. The proposed lagoon is designed to provide storage capacity of 9,430 m^3 or 10% higher. Having extra storage capacity will allow the Colony to implement a trickle discharge extending from two to four weeks while not challenging the normal operation of the wastewater treatment lagoon. Of note, even though it is typical to design for a maximum population of 150 people, the Riverdale Colony population has remained fairly consistent at 82 for several years and the treated effluent discharged from the lagoon is expected to be under 60% of the hydraulic storage capacity.

The maximum single discharge into the discharge ditch from the proposed lagoon will be the storage volume of the secondary cell, or 7,440 m^3. Treated effluent will be discharged from the isolated secondary cell at a rate that optimizes the opportunity for nutrients in the effluent to be assimilated in the discharge route prior to reaching the second order drain.

Vegetation harvesting will be implemented along the discharge ditch on Colony land to promote nutrient uptake. The grass cover will be mowed in July (after the lagoon discharge) and baled to be used as livestock feed. In some cases, a second cut of grass will be made in late September, which would be prior to a fall discharge.

<u>We also seek a revision to Clause 39c) which reads:</u>

The Licencee shall remove and dispose all the dewatered sludge from the wastewater treatment lagoon that was operating under Licence No. 963 and the supplementary unlicenced secondary cell to the primary cell of the Development;

We request the wording of Clause 39c) be revised to allow for sludge to be placed in the new secondary cell of the development in addition to the new primary cell.

We look forward to your response on these changes. If you have any questions, please contact the undersigned; otherwise please accept this letter as an alteration notification for the Riverdale Colony lagoon licence.

Kind regards,

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Jason Bunn, P.Eng.
Environmental Engineer

enclosures

cc: Sam Hofer, Manager – Riverdale Colony
Siobhan Burland Ross, P.Eng. – Manitoba Conservation

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