



May 10, 2019

Via: Email

Mr. Alex Rheault
Big North Lodge
Box 24
Minaki, ON P0X 1J0

Dear Mr. Rheault:

**Re: Minaki on the River Inc. ECA Amendment - Environmental Registry No. 13-4986
Project No.: 300032750.3000**

R.J. Burnside & Associates Limited (Burnside) is retained by the residents of Minaki and the Minaki Cottagers Association Inc. to provide technical comments related to wastewater servicing of the proposed Minaki on the River (MOTR) development in Minaki, Ontario. Specifically, we have been requested to provide comments in support of your submissions to the Ministry of the Environment, Conservation and Parks (MECP).

Since 2013, we have provided comments on matters related to the wastewater servicing for the subject lands, including the preparation of our 2013 report entitled *Review of the Minaki Lodge Sewage Treatment Plant ECA*, and our June 2017 *Supplement Report on the Wastewater Treatment System for Minaki on the River*. In 2017, I provided evidence at the Ontario Municipal Board hearing. Our work has been undertaken to provide technical opinions within our area of expertise, in a fair, objective, and non-partisan manner, in general conformance with an Expert's Duty.

Proposed ECA Amendment

The sewage treatment (STP) plant serviced the former Minaki Lodge, and consists of a Rotating Biological Contactor (RBC) system with disinfection and direct discharge of treated effluent to the Winnipeg River, rated for 186,000 L/day. The STP was approved by the MECP, and operated between 1988 and 1995. Our 2013 report identified a number of issues with the a 2012 ECA, which were addressed by the Ministry in the 2014 amended ECA, including the requirement to upgrade with plan with phosphorus removal equipment, as well as the implementation of enforceable effluent limits.

We understand that Minaki on the river Inc. has applied to the MECP for an amended Environmental Compliance Approval (ECA) to allow a seasonal recreational vehicle park to be developed and serviced by the existing wastewater treatment system.

Baseline Studies

In our 2013 and 2017 reports, we discussed the potential for impacts to the Winnipeg River as the receiver of effluent discharge. In a 2012 letter, the MECP identified that there is adequate assimilative capacity in the receiver based not on the existing water quality at the time, but only on the dilution provided. The ECA was amended in 2012 and again in 2014, without any site specific studies and supporting documentation with respect to potential effluent impacts on the receiving water body.

We continue to be of the opinion that a significant amount of time has passed since any receiving water study was completed, and therefore, an updated impact assessment is warranted. The most recent study on the assimilative capacity of the receiver was conducted in 1988. It has been our general experience that the Ministry applies the most current guidelines at the time of their review; therefore, an updated review of potential impacts to the receiver should be conducted in accordance with current MECP guidelines. We note that the current ECA effluent limits appear to be consistent with the typical expected performance for an RBC system according to Ministry guidelines (2008). However, if an updated study of the receiver shows that lower effluent limits are required to protect the river, there is no guarantee that the existing equipment in the STP could meet those limits.

Discharge to Surface Water

Based on a review of publicly available ECAs on the MECP's Access Environment database, we note that there are a limited number of ECAs for RBC systems with direct discharge to surface water. In addition to the ECA for MOTR, we were able to locate only two other ECAs for RBCs with direct surface discharge. We note that the majority of systems that include RBC technology appear to also include additional treatment processes such as tertiary filtration or discharge to a subsurface leaching bed for final polishing (or in some cases, both). The MOTR RBC does not contain either of these additional processes, and it is our understanding that no additional equipment is proposed for this facility as part of the current ECA amendment. Table 1 (enclosed) summarizes our review of existing ECAs for systems employing RBCs.

STP Review

The documentation from MOTR states that due to the fact that the STP has not been in operation since 2003, MECP requested an engineering review to determine the plant's ability to function according to the standards outlined in the current ECA. A WSP report provides an overview of the various components of the STP and their functional condition, but does not provide any comments on the plants ability to function according to the standards in the ECA, i.e. the ability of the plant to meet the effluent limits and objectives as stated on the ECA.

Should you have any questions regarding this information, please contact the undersigned.

Yours truly,

R.J. Burnside & Associates Limited



Anne Egan, P.Eng.
Onsite Wastewater Specialist

Enclosure(s) Table 1 – Review of ECAs for RBC Systems

cc: Mr. Rick Handlon, MCA (enc.) (Via: Email)
 Mr. Mark Engebretson, MCA (enc.) (Via: Email)

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Table 1 - Review of ECAs for RBC Systems

Receiver	Name	Year of Approval	Daily Flow (m ³ /day)	Type of Biological Process	Additional Equipment	Receiver	Effluent Limits						Effluent Objectives					
							CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TAN (mg/L)	E.Coli (organisms/100 mL)	Nitrate+Nitrite N (mg/L)	CBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TAN (mg/L)	E.Coli (organisms/100 mL)	Nitrate+Nitrite N (mg/L)
Surface Water	Minaki on the River Inc., District of Kenora	2014	186	RBC	Chemical Dosing	Winnipeg River	20	20	1	20	200	-	15	15	0.5	10	100	
	Noront Resources, Esker Camp STP, Exploration Camp, Timmins District	2011	41.25	RBC	Chemical Dosing	Onsite Swamp	25	25	1.0	2.0	200	-	-	-	-	-	-	-
	Wildwood Golf and RV Resort Inc., Essex County	2013	100	RBC	Chemical Dosing, Tertiary Filters	Onsite Pond	10	10	0.5	3.0/5.0	100	-	5.0	5.0	0.3	2.0/4.0	-	-
Sub-Surface	Island Lake Estates - Mono	2014	365	RBC	Chemical Dosing & Tertiary Filters	Leaching Bed	10	10	0.25	2	-	3	-	-	-	-	-	-
	Mini Lakes Community	2017	158	RBC	Chemical Dosing & Denitrification Tanks	Leaching Bed	20	20	1.0	-	-	8	-	-	-	-	-	-
	Parkbridge Pioneer Point Resort	2011	135	RBC	None listed	Leaching Bed	-	-	-	-	-	-	20	20	-	2	-	-
	Watermark Development - Mono	2009	177	RBC	Chemical Dosing & Tertiary Filters	Leaching Bed	-	-	-	-	-	-	10	10	1	-	-	5
	Millcroft Inn - Alton (Region of Peel Certificate of Approval/ Use Permit)	1991	100	RBC	Chemical Dosing	Leaching Bed			1									10
	Parkbridge - Northville Estates & Oakridge Dunes (Lambton)	2017	36	RBC	None listed	Leaching Bed	No objectives or limits listed on ECA											
	Parkbridge - Leisure Lake (Essex)	2016	122.5	RBC	None listed	Leaching Bed	-	-	-	-	-	-	30	30				

Minaki Cottagers Association - 300032750