

Webb, Bruce (SD)

From: Webb, Bruce (SD)
Sent: December-27-18 1:08 PM
To: 'Colin McKinnon'
Cc: Larissa Love; Ken Anderson; Dorward, Kurt (SD)
Subject: RE: Ashern Lagoon Environment Act Licence 1136 RR RM of West Interlake - Conductivity Results

Thanks! The new cell can be put into operation, as all requirements of clauses 19 – 22 of Environment Act Licence No. 1136 RR have been met.

As required by Clause 23 of the Licence, record drawings for the new cell are due by April 27, 2019.

Bruce.

Bruce Webb, P. Eng.
Water Development and Control Assessment Officer
Environmental Approvals Branch
Manitoba Sustainable Development
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From: Colin McKinnon <mckinnonc@ae.ca>
Sent: December-18-18 3:30 PM
To: Webb, Bruce (SD) <Bruce.Webb@gov.mb.ca>
Cc: Larissa Love <cao@rmofwestinterlake.com>; Ken Anderson <andersonk@ae.ca>
Subject: Ashern Lagoon Environment Act Licence 1136 RR RM of West Interlake - Conductivity Results

Hi Bruce:

Please find attached the results of the hydraulic conductivity test for Ashern Lagoon from WoodPLC.

Let me know if there are any issues or concerns and if the lagoon can be put into service. Feel free to give me a call to discuss.

Thank you,

Colin

Colin McKinnon, P.Eng.
Project Manager
Associated Engineering (Sask.) Ltd.
203 - Number Five Donald Street, Winnipeg, MB R3L 2T4
Tel: 204.942.6391 | Cel: 204.806.0023

ASTM D5084 - HYDRAULIC CONDUCTIVITY REPORT



TO: Associated Engineering (Sask) Ltd.
1-2225 Northridge Drive
Saskatoon, SK S7L 6X6

PROJECT NO: WX12368
CLIENT: Associated Engineering
DATE SUBMITTED: 22-Nov-18

PROJECT: Ashern Lagoon

TEST HOLE: TH06
SAMPLE NO.: 1
SAMPLE DEPTH: 0-2 ft

PERMEANT: De-Aired Tap Water
HYDRAULIC GRADIENT: 27.84


CONSTANT HEAD METHOD ($K = cQL/thA$)

	Sample Height, L (cm)	Sample Dia. (cm)	Water Content (%)	Dry Density (kg/m ³)	Degree of Saturation (%)	Cell Pressure (kPa)	Back Pressure (kPa)	Differential Pressure, h (kPa)
Initial	7.58	7.20	11.9%	2069	90.0%	241.4	196.5	20.7
Final	7.61	7.25	13.3%	2042	95.8%			

Date & Time		Time, t (seconds)	Flow (Q)		Temp. Corr, c	Hyd. Cond. Corrected, K (cm/s)
Start	End		Influent (ml)	Effluent (ml)		
11/27/18 11:10 AM	11/28/18 7:40 AM	73800	1.80	1.85	1.244	2.71E-08
11/28/18 7:40 AM	11/29/18 8:21 AM	88860	2.00	2.40	0.986	2.15E-08
11/29/18 8:21 AM	11/30/18 7:49 AM	84480	1.70	1.30	0.980	1.53E-08
11/30/18 7:49 AM	12/3/18 7:43 AM	258840	4.40	4.30	0.980	1.45E-08
12/3/18 7:43 AM	12/4/18 8:16 AM	88380	1.30	1.30	0.980	1.27E-08
12/4/18 8:16 AM	12/5/18 7:58 AM	85320	1.10	1.20	0.980	1.16E-08
12/5/18 7:58 AM	12/6/18 7:48 AM	85800	1.10	1.05	0.986	1.09E-08

Average Temperature
Corrected Value (cm/s): 1.24E-08

Wood Environment & Infrastructure Solutions

Per: 
Jorden Wiwcharyk, P.Eng.
Geotechnical Engineer

*Reporting of these results constitutes a testing service only.
Engineering interpretation or evaluation of the test results is provided only on written request.*

ASTM D5084 - HYDRAULIC CONDUCTIVITY REPORT



TO: Associated Engineering (Sask) Ltd.
1-2225 Northridge Drive
Saskatoon, SK S7L 6X6

PROJECT NO: WX12368
CLIENT: Associated Engineering
DATE SUBMITTED: 22-Nov-18

PROJECT: Ashern Lagoon

TEST HOLE: TH07
SAMPLE NO.: 1
SAMPLE DEPTH: 1-3 ft

PERMEANT: De-Aired Tap Water
HYDRAULIC GRADIENT: 28.62


CONSTANT HEAD METHOD (K = cQL/thA)

	Sample Height, L (cm)	Sample Dia. (cm)	Water Content (%)	Dry Density (kg/m ³)	Degree of Saturation (%)	Cell Pressure (kPa)	Back Pressure (kPa)	Differential Pressure, h (kPa)
Initial	7.37	7.16	12.6%	2337	163.1%			
Final	8.23	7.17	13.4%	2084	103.8%	241.4	196.5	20.7

Date & Time		Time, t (seconds)	Flow (Q)		Temp. Corr, c	Hyd. Cond. Corrected, K (cm/s)
Start	End		Influent (ml)	Effluent (ml)		
11/8/18 9:50 AM	11/9/18 7:42 AM	78720	1.10	1.10	1.244	1.51E-08
11/9/18 7:42 AM	11/12/18 10:31 AM	269340	3.40	3.30	0.998	1.08E-08
11/12/18 10:31 AM	11/13/18 9:49 AM	83880	1.00	1.00	1.017	1.05E-08
11/13/18 9:49 AM	11/14/18 8:02 AM	79980	0.90	0.80	1.029	9.49E-09
11/14/18 8:02 AM	11/15/18 8:05 AM	86580	0.90	1.00	1.011	9.62E-09
11/15/18 8:05 AM	11/16/18 7:45 AM	85200	0.90	0.90	0.998	9.15E-09
11/16/18 7:45 AM	11/16/18 3:15 PM	27000	0.30	0.30	1.005	9.69E-09

Average Temperature
Corrected Value (cm/s): 9.49E-09

Wood Environment & Infrastructure Solutions

Per: 
Jorden Wiwcharyk, P.Eng.
Geotechnical Engineer

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