



Gull Lake Basin Management Board
ATTN: DAVID CAIRNS / JEFF SUGGETT
Box 31, Grp 327, RR3
Beausejour MB ROE OCO

Date Received: 03-JUN-20
Report Date: 11-JUN-20 15:54 (MT)
Version: FINAL

Client Phone: 204-799-1554

Certificate of Analysis

Lab Work Order #: L2455323
Project P.O. #: NOT SUBMITTED
Job Reference: GULL LAKE MB
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2455323-1 6LBMB							
Sampled By: DC on 03-JUN-20 @ 07:00							
Matrix: Surface Water							
Nitrate + Nitrite							
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		03-JUN-20	R5116087
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		11-JUN-20	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		03-JUN-20	R5116087
Miscellaneous Parameters							
Phosphorus (P)-Total	0.0205		0.0030	mg/L		05-JUN-20	R5111273
Total Kjeldahl Nitrogen	1.56		0.20	mg/L	09-JUN-20	10-JUN-20	R5115281
Zebra Mussel veliger	0.0		0	Count/samp		04-JUN-20	R5107479
Note: No Zebra Mussel veligers observed.							
Total Coliform and E.coli by MPN QT97							
Total Coliforms	51		1	MPN/100mL		03-JUN-20	R5107596
Escherichia Coli	5		1	MPN/100mL		03-JUN-20	R5107596

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	APHA 4500 NorgD (modified)
Aqueous samples are digested in a block digester with sulfuric acid and copper sulfate as a catalyst. Total Kjeldahl Nitrogen is then analyzed using a discrete analyzer with colorimetric detection.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-N-WP	Water	Nitrite in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-IC-N-WP	Water	Nitrate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L
This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.			
TC,EC-QT97-WP	Water	Total Coliform and E.coli by MPN QT97	APHA 9223B QT97
This analysis is carried out using procedures adapted from APHA Method 9223B "Enzyme Substrate Coliform Test". E. coli and Total Coliform are determined simultaneously. The sample is mixed with a mixture of hydrolyzable substrates and then sealed in a 97-well packet. The packet is incubated at 35.0 +/- 0.5 degrees C for 18 or 24 hours and then the number of wells exhibiting positive responses are counted. The final results are obtained by comparing the number of positive responses to a probability table.			
ZEBRA-ID-WP	Water	Zebra Mussel Identification	Microscopic Examination
Samples are sieved through a 75 micrometer sieve and examined under a polarized light stereoscopic microscope at 50x.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample
 mg/kg wwt - milligrams per kilogram based on wet weight of sample
 mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
 mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2455323

Report Date: 11-JUN-20

Page 1 of 2

Client: Gull Lake Basin Management Board
 Box 31, Grp 327, RR3
 Beausejour MB R0E 0C0
 Contact: DAVID CAIRNS / JEFF SUGGETT

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOTKJ-WP								
	Water							
Batch	R5115281							
WG3337517-10	LCS							
Total Kjeldahl Nitrogen			103.0		%		75-125	10-JUN-20
WG3337517-9	MB							
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	10-JUN-20
NO2-IC-N-WP								
	Water							
Batch	R5116087							
WG3334822-6	LCS							
Nitrite (as N)			99.1		%		90-110	03-JUN-20
WG3334822-5	MB							
Nitrite (as N)			<0.010		mg/L		0.01	03-JUN-20
NO3-IC-N-WP								
	Water							
Batch	R5116087							
WG3334822-6	LCS							
Nitrate (as N)			99.7		%		90-110	03-JUN-20
WG3334822-5	MB							
Nitrate (as N)			<0.020		mg/L		0.02	03-JUN-20
P-T-COL-WP								
	Water							
Batch	R5111273							
WG3335989-18	LCS							
Phosphorus (P)-Total			95.3		%		80-120	05-JUN-20
WG3335989-17	MB							
Phosphorus (P)-Total			<0.0030		mg/L		0.003	05-JUN-20
TC,EC-QT97-WP								
	Water							
Batch	R5107596							
WG3334583-1	MB							
Total Coliforms			<1		MPN/100mL		1	03-JUN-20
Escherichia Coli			<1		MPN/100mL		1	03-JUN-20

Quality Control Report

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



12 - 1329 Niakwa Rd. E.
Winnipeg, Manitoba R2J 3T
Tel: (204) 255-9720
Fax: (204) 255-9721
Toll Free: 1 800 607 7555

Chain of Custody / Analytical Request Form



L2455323-COFC

WORK ORDER NO: 5323
LAB NO.: _____
DATE RECEIVED: June 3
TIME RECEIVED: 9:30
BY: CD TEMP: 18.5

FOR LABORATORY USE ONLY (S)

Sample Condition Upon Receipt: ACCEPTABLE NON-ACCEPTABLE
 Frozen Cold Ambient Broken Leakage Incorrect Sample Container
COMMENT: _____

Date Sampled: June 3/20 Time: 07:00 A.M. P.M. Date Required: _____
Location: Gull Lake MB
(Town, Community, City) Submitter's Name Printed: David Cairns
Community Code Number: _____ Sample Submitted By: _____
Rural Municipality/LGC/UVD: _____

SAMPLE TYPE

- DRINKING WATER**
- Untreated Well
 - Treated Well
 - Treated Municipal
 - Non-Treated Municipal
 - Water-Surface-Raw
 - Water-Surface-Treated
- PURPOSE OF TEST**
- Private Real Estate Water Main

PLEASE PRINT & PRESS FIRMLY

- NON-DRINKING WATER**
- Sewage/Waste Water
 - Lake/River
 - Swimming Pool
 - Whirl Pool
 - Other: _____

NOTES & CONDITIONS

1. Quote number **MUST BE** provided to insure proper pricing.
2. Failure to properly complete all portions of this form may delay analysis.
3. ALS's liability limited to cost of analysis.

SERVICE REQUESTED

- REGULAR PRIORITY (50% SURCHARGE)
- EMERGENCY (100% SURCHARGE)
- SAME DAY (200% SURCHARGE)

LAB NUMBER	SAMPLE IDENTIFICATION	ALS CUSTOMER #:	QUOTE #:
	<u>GLBMB</u>		
	<u>Please follow same instructions from last year w/o # L227598</u>	REPORT TO BE SENT TO	
		NAME: <u>David Cairns</u>	
		COMPANY: <u>Gull Lake Basin Mgmt Board</u>	
		ADDRESS: <u>Box 31 Grp 327 RR3</u>	
		CITY/TOWN: <u>Beauséjour</u> / PROV.: <u>MB</u>	
		POSTAL CODE: <u>R0E 0C0</u>	
		PHONE: <u>204-799-1554</u>	
		BY: MAIL <input type="checkbox"/> FAX <input type="checkbox"/>	
		E-MAIL <input checked="" type="checkbox"/> <u>glbmb16@gmail.com</u> (FAX NUMBER) (EMAIL ADDRESS)	
		CC	
		NAME: _____	
		ADDRESS: _____	
		CITY/TOWN: _____ / PROV.: _____	
		POSTAL CODE: _____	
		PHONE: _____	
		BY: MAIL <input type="checkbox"/> FAX <input type="checkbox"/>	
		E-MAIL <input type="checkbox"/> _____ (FAX NUMBER) (EMAIL ADDRESS)	

Analyses required _____

BILLING ADDRESS SAME AS REPORT TO
NAME: _____
COMPANY: _____
ADDRESS: _____
CITY/TOWN: _____ / PROV.: _____
POSTAL CODE: _____

SAMPLING INSTRUCTIONS ON REVERSE SIDE
ALS ENVIRONMENTAL
12 - 1329 Niakwa Rd. E., Winnipeg, MB Canada R2J 3T4
Phone: +1 204 255 9720 Fax: +1 204 255 9721 www.alsglobal.com
A Campbell Brothers Limited Company

PAYMENT PARTICULARS (CASH NOT ACCEPTED)

- INVOICE NEEDED / CLIENT'S P.O. NO. _____
- INTERAC
- CHEQUE Subtotal \$ _____
- VISA G.S.T. \$ _____
- MASTERCARD Total \$ _____

* OUR POLICY IS NOT TO ACCEPT SAMPLES FROM THE PRIVATE CITIZEN WITHOUT PREPAYMENT

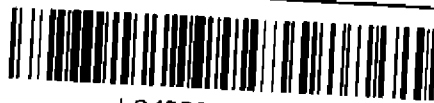
SUBMITTER COPY

ENTERED IN LIMS BY: _____



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 - EMERGENCY (100% SURCHARGE)
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LAB NUMBER	SAMPLE IDENTIFICATION	ALS CUSTOMER #:	QUOTE #:
	<u>6LBMB</u>		
	<u>Please follow same instructions from last year w/o # L227598</u>	REPORT TO BE SENT TO NAME: <u>David Cairns</u> COMPANY: <u>Gull Lake Basin Mgmt Board</u> ADDRESS: <u>Box 31 Grp 327 RR3</u> CITY/TOWN: <u>Browseville</u> / PROV.: <u>MB</u> POSTAL CODE: <u>R0E 0C0</u> PHONE: <u>204-799-1554</u> BY: MAIL <input type="checkbox"/> FAX <input type="checkbox"/> E-MAIL <input checked="" type="checkbox"/> <u>g15mb16@gmail.com</u> (FAX NUMBER) (EMAIL ADDRESS)	
		CC NAME: _____ ADDRESS: _____ CITY/TOWN: _____ / PROV.: _____ POSTAL CODE: _____ PHONE: _____ BY: MAIL <input type="checkbox"/> FAX <input type="checkbox"/> E-MAIL <input type="checkbox"/> _____ (FAX NUMBER) (EMAIL ADDRESS)	

Analyses required _____

BILLING ADDRESS SAME AS REPORT TO

NAME: _____
COMPANY: _____
ADDRESS: _____
CITY/TOWN: _____ / PROV.: _____
POSTAL CODE: _____

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SUBMITTER COPY

ENTERED IN LIMS BY: _____