



Hamlet of Arviat  
ATTN: ALEX ISHALOOK  
PO Box 278  
Arviat NU X0C 0E0

Date Received: 13-NOV-13  
Report Date: 14-NOV-13 14:22 (MT)  
Version: FINAL

Client Phone: 867-857-2860

## Certificate of Analysis

**Lab Work Order #:** L1391226  
**Project P.O. #:** NOT SUBMITTED  
**Job Reference:**  
**C of C Numbers:**  
**Legal Site Desc:**

Paul Nicolas  
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

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 A Campbell Brothers Limited Company

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1391226-1 WATER TRUCK #153 Sampled By: A.I on 12-NOV-13 @ 09:35 Matrix: Water							
<b>Total Coliform and E.coli</b>							
Total Coliforms	0		0	MPN/100mL		13-NOV-13	R2741392
Escherichia Coli	0		0	MPN/100mL		13-NOV-13	R2741392
L1391226-2 WATER TRUCK #145 Sampled By: A.I on 12-NOV-13 @ 09:35 Matrix: Water							
<b>Total Coliform and E.coli</b>							
Total Coliforms	0		0	MPN/100mL		13-NOV-13	R2741392
Escherichia Coli	0		0	MPN/100mL		13-NOV-13	R2741392
L1391226-3 WATER TRUCK #130 Sampled By: A.I/P.I. on 12-NOV-13 @ 09:35 Matrix: Water							
<b>Total Coliform and E.coli</b>							
Total Coliforms	0		0	MPN/100mL		13-NOV-13	R2741392
Escherichia Coli	0		0	MPN/100mL		13-NOV-13	R2741392
L1391226-4 WATER TRUCK #114 Sampled By: A.I/P.I. on 12-NOV-13 @ 09:35 Matrix: Water							
<b>Total Coliform and E.coli</b>							
Total Coliforms	0		0	MPN/100mL		13-NOV-13	R2741392
Escherichia Coli	0		0	MPN/100mL		13-NOV-13	R2741392
L1391226-5 WATER TRUCK #128 Sampled By: A.I on 12-NOV-13 @ 09:35 Matrix: Water							
<b>Total Coliform and E.coli</b>							
Total Coliforms	0		0	MPN/100mL		13-NOV-13	R2741392
Escherichia Coli	0		0	MPN/100mL		13-NOV-13	R2741392
L1391226-6 DAYCARE/SHARED CARE BUILDING Sampled By: A.I on 12-NOV-13 @ 09:35 Matrix: Water							
<b>Total Coliform and E.coli</b>							
Total Coliforms	0		0	MPN/100mL		13-NOV-13	R2741392
Escherichia Coli	0		0	MPN/100mL		13-NOV-13	R2741392
L1391226-7 HEALTHY MOMS/HEALTHY BABIES BUILDING Sampled By: A.I/P.I. on 12-NOV-13 @ 09:35 Matrix: Water							
<b>Total Coliform and E.coli</b>							
Total Coliforms	0		0	MPN/100mL		13-NOV-13	R2741392
Escherichia Coli	0		0	MPN/100mL		13-NOV-13	R2741392
L1391226-8 J.A. HIGH SCHOOL Sampled By: A.I on 12-NOV-13 @ 09:35 Matrix: Water							

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1391226-8	J.A. HIGH SCHOOL							
Sampled By:	A.I on 12-NOV-13 @ 09:35							
Matrix:	Water							
<b>Total Coliform and E.coli</b>								
Total Coliforms		0		0	MPN/100mL		13-NOV-13	R2741392
Escherichia Coli		0		0	MPN/100mL		13-NOV-13	R2741392

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

## Reference Information

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
TC,EC-QT51-WP	Water	Total Coliform and E.coli	APHA 9223
The analysis of Total Coliform (TC) & Escherichia coli (EC) is processed by Quanti-tray (QT): Two substrates, ONPG for TC detection and MUG for EC detection are used. The substrates are added to the 100 ml sample dispensed into the 51 well tray. The tray is incubated at 35 Celcius for 24 hours. A colour reaction develops to indicate a positive reaction (presence of TC, EC). The number of positive wells are counted and converted to Most Probable Number Units (MPNU) per 100 ml. This test is also called 'rapid MPN method', therefore, the MPN results are derived from a statistical table with a 95% confidence and report as MPN units. The QT detection limit for a negative result is reported as zero.			
TC,EC-QT51-WP	Water	Total Coliform and E.coli	APHA 9223 QT
The analysis of Total Coliform (TC) & Escherichia coli (EC) is processed by Quanti-tray (QT): Two substrates, ONPG for TC detection and MUG for EC detection are used. The substrates are added to the 100 ml sample dispensed into the 51 well tray. The tray is incubated at 35 Celcius for 24 hours. A colour reaction develops to indicate a positive reaction (presence of TC, EC). The number of positive wells are counted and converted to Most Probable Number Units (MPNU) per 100 ml. This test is also called 'rapid MPN method', therefore, the MPN results are derived from a statistical table with a 95% confidence and report as MPN units. The QT detection limit for a negative result is reported as zero.			

\*\* 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 ww - 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.*



L1391226

CUC # W/10578

Page 1

L1391226-COFC

## Report To

Company: Arviat Community Gov't : Services

Contact: Alex Ishakook

Address: P.O. Box 278, Arviat

Nunavut XOC-CEO

Phone: 867 857 2860 Fax: 867 857 2661

Invoice To Same as Report? ☐ Yes ☒ NoHardcopy of Invoice with Report? ☐ Yes ☒ No

Company: Community Gov't : Services

Contact: Lexie Morling

Address: Rankin Inlet, NU

Phone: 867 645 8114 Fax: 867 645 8197

Lab Work Order #

(lab use only)

☒ Standard☐ Other☒ PDF☐ Excel☐ Digital☐ Fax

Email 1: aishakook@gov.nu.ca

Email 2: bchislett@gov.nu.ca

Email 3:

Client / Project Information

Job #:

PO / AFE:

LSD:

Quote #:

ALS

Contact:

Service Requested (Rush for analysis subject to )

☒ Regular (Standard Turnaround - Business Days)☐ Priority (2-4 Business Days) - Contact ALS to C☐ Emergency (1-2 Bus. Days) - Contact ALS to C☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT

## Analysis Request

Please indicate below Filtered, Preserved or both (F,

Sample #	Sample Identification (This description will appear on the report)	Date Sampled	Time Sampled	Sample Type
----------	---	--------------	--------------	-------------

1	Water Truck # 153			
---	-------------------	--	--	--

2	Water Truck # 145			
---	-------------------	--	--	--

3	Water Truck # 130			
---	-------------------	--	--	--

4	Water Truck # 114			
---	-------------------	--	--	--

5	Water Truck # 128			
---	-------------------	--	--	--

6	Daycare/Shared Care building			
---	------------------------------	--	--	--

7	Healthy moms/Healthy Babies building			
---	--------------------------------------	--	--	--

8	J.A. High School			
---	------------------	--	--	--

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Water test for Total Coliform and E-Coli

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

## SHIPMENT RELEASE (client use)

## SHIPMENT RECEPTION (lab use only)

## SHIPMENT VERIFICATION (lab use only)

Released by: Alex Ishakook	Date (dd-mm-yy): 12/11/2013	Time (hh-mm): 10:36am	Received by: [Signature]	Date: 12/11/2013	Time: 15:00	Temperature: 10 °C	Verified by:	Date:	Time:	OK Yes If
----------------------------	-----------------------------	-----------------------	--------------------------	------------------	-------------	--------------------	--------------	-------	-------	-----------------



Depa  
Aco  
Okoo  
Minia



L1391226-COFC

valliq  
Kivalliq  
Kivalliq

Environmental Health Officer  
Bag 72, Rankin Inlet, NU, X0C 0G0  
Phone: (867) 645-8273 Fax: (867) 645-8274



## Bacteriological Analysis of Drinking Water Sample Collection Information Form

### Sample Collection Information

Community from which sample was collected:	Arviat, Nunavut
Location of sample collection:	Water Truck #153
Date of sample collection:	November 12, 2013
Time of sample collection:	9:35 am
Name of person who collected sample:	Alex Ishalook
Telephone number of person who collected sample:	867 857 2860

### For Laboratory Use Only

Date Received:	
Date Processed:	Processed by:
Results	
Total Coliform per 100ml:	E. coli per 100ml:
Date Read:	Read by:

☐

#### No Significant Evidence of Bacteriological Contamination

Sample collected is bacteriologically safe for human consumption.

☐

#### Significant Evidence of Bacteriological Contamination

Sample collected may be unsafe for human consumption as bacteriological contamination is present.  
Resample as soon as possible.

☐

#### Unsafe to Drink

Sample collected is unsafe for human consumption as fecal contamination is present.  
Resample as soon as possible.

The above results relate only to the sample tested. This water sample was only tested for the presence of both Total Coliform and E. coli bacterial indicators of contamination by using membrane filtration.



Depa  
ᐃᑦᑦ  
Okoo  
Minis



L1391226-COFC

valliq  
ᐃᑦᑦᑦᑦᑦᑦᑦᑦᑦᑦ  
: Kivalliq  
Kivalliq

Environmental Health Officer  
Bag 72, Rankin Inlet, NU, X0C 0G0  
Phone: (867) 645-8273 Fax: (867) 645-8274



## Bacteriological Analysis of Drinking Water Sample Collection Information Form

### Sample Collection Information

Community from which sample was collected:	Arviat, Nunavut
Location of sample collection:	Water Truck #145
Date of sample collection:	November 12, 2013
Time of sample collection:	9:32 am
Name of person who collected sample:	Alex Ishalook
Telephone number of person who collected sample:	867 857 2860

### For Laboratory Use Only

Date Received:	
Date Processed:	Processed by:
Results	
Total Coliform per 100ml:	E. coli per 100ml:
Date Read:	Read by:

☐

#### No Significant Evidence of Bacteriological Contamination

Sample collected is bacteriologically safe for human consumption.

☐

#### Significant Evidence of Bacteriological Contamination

Sample collected may be unsafe for human consumption as bacteriological contamination is present.  
Resample as soon as possible.

☐

#### Unsafe to Drink

Sample collected is unsafe for human consumption as fecal contamination is present.  
Resample as soon as possible.

The above results relate only to the sample tested. This water sample was only tested for the presence of both Total Coliform and E. coli bacterial indicators of contamination by using membrane filtration.