

From: [Erica Janes](#)
To: [Permits](#)
Cc: [Heather Scott](#)
Subject: FW: Emailing: 190051 - 1920 - FINAL REPORT, 190051 - 1920 - FINAL REPORT
Date: February 18, 2019 11:50:56 AM
Attachments: [190051 - 1920 - FINAL REPORT.pdf](#)
[190051 - 1920 - FINAL REPORT.xls](#)

Please post email and attachments to MV2011L3-0001 - Ft Smith - 5 Reports and Studies / SNP Reports - SNP Results from stations 567-1 and 567-2 on February 1 2019 - Feb18-19

-----Original Message-----

From: Glen Hudy <Glen_Hudy@gov.nt.ca>
Sent: Monday, February 18, 2019 11:03 AM
To: Jesse Foote <jfoote@fortsmith.ca>; Erica Janes <ejanes@mvlwb.com>; Wendy Bidwell <Wendy_Bidwell@gov.nt.ca>
Subject: Emailing: 190051 - 1920 - FINAL REPORT, 190051 - 1920 - FINAL REPORT

Jesse,

Please see attached for final report 190051.

Have a good day.

Mársi | Kinanaskomitin | Thank you | Merci | Haij' | Quana | Qujannamiik | Quyanainni | Máhsı | Máhsı | Mahsi Glen Hudy Chemist, Quality Assurance Water Resources Environment and Natural Resources Government of the Northwest Territories

Taiga Environmental Laboratory
PO Box 1320
Yellowknife, NT X1A 2L9

Phone: 867-767-9235 Ext. 53154
Fax: 867-920-8740
www.enr.gov.nt.ca

Your message is ready to be sent with the following file or link attachments:

190051 - 1920 - FINAL REPORT
190051 - 1920 - FINAL REPORT

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
190051

- FINAL REPORT -

Prepared For: Town of Fort Smith

Address: P.O. Box 147
Fort Smith, NT
X0E 0P0

Attn: Jesse Foote

Facsimile: (867) 872-3166

Final report has been reviewed and approved by:

A handwritten signature in black ink, appearing to read "Glen Hudy".

Glen Hudy
Quality Assurance Officer

NOTES:

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) to ISO/IEC 17025 as a testing laboratory for specific tests registered with CALA.
- Routine methods are based on recognized procedures from sources such as
 - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - Environment Canada
 - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

ReportDate: Friday, February 15, 2019

Print Date: *Monday, February 18, 2019*

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Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
190051

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **567-1**

Taiga Sample ID: **001**

Client Project: MV2011L3-0001

Sample Type: Potable

Received Date: 04-Feb-19

Sampling Date: 01-Feb-19

Sampling Time: 14:00

Location: 567-1

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Inorganics - Nutrients</u>						
Organic Carbon, Dissolved	2.4	0.5	mg/L	14-Feb-19	SM5310:B	
Organic Carbon, Total	2.5	0.5	mg/L	14-Feb-19	SM5310:B	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	80.9	0.4	mg/L	04-Feb-19	SM2320:B	
Colour, Apparent	< 5	5	CU	04-Feb-19	SM2120:B	
pH	7.27		pH units	04-Feb-19	SM4500-H:B	
Solids, Total Dissolved	154	10	mg/L	07-Feb-19	SM2540:C	
Solids, Total Suspended	< 3	3	mg/L	07-Feb-19	SM2540:D	
Turbidity	0.14	0.05	NTU	04-Feb-19	SM2130:B	
<u>Major Ions</u>						
Chloride	15.0	0.7	mg/L	04-Feb-19	SM4110:B	
Fluoride	< 0.1	0.1	mg/L	04-Feb-19	SM4110:B	
Hardness	104	0.7	mg/L	04-Feb-19	SM4110:B	
Nitrate as Nitrogen	0.35	0.01	mg/L	04-Feb-19	SM4110:B	

ReportDate: Friday, February 15, 2019

Print Date: **Monday, February 18, 2019**

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Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
190051

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **567-1**

Taiga Sample ID: **001**

Sodium	7.1	0.1	mg/L	04-Feb-19	SM4110:B
Sulphate	23	1	mg/L	04-Feb-19	SM4110:B

Subcontracted Organics

Bromodichloromethane	0.0027	0.001	mg/L	12-Feb-19	SW-846
Bromoform	< 0.0050	0.005	mg/L	12-Feb-19	SW-846
Chloroform	0.0160	0.001	mg/L	12-Feb-19	SW-846
Dibromochloromethane	< 0.0010	0.001	mg/L	12-Feb-19	SW-846
Trihalomethanes, Total	0.0187	0.005	mg/L	12-Feb-19	SW-846

Trace Metals, Total

Aluminum	50.6	0.6	µg/L	07-Feb-19	EPA200.8
Arsenic	< 0.2	0.2	µg/L	07-Feb-19	EPA200.8
Barium	45.4	0.1	µg/L	07-Feb-19	EPA200.8
Cadmium	< 0.04	0.04	µg/L	07-Feb-19	EPA200.8
Chromium	< 0.1	0.1	µg/L	07-Feb-19	EPA200.8
Copper	1.2	0.2	µg/L	07-Feb-19	EPA200.8
Iron	< 5	5	ug/L	07-Feb-19	EPA200.8
Lead	< 0.1	0.1	µg/L	07-Feb-19	EPA200.8
Manganese	9.9	0.1	µg/L	07-Feb-19	EPA200.8
Mercury	< 0.01	0.01	µg/L	07-Feb-19	EPA200.8
Selenium	0.5	0.3	µg/L	07-Feb-19	EPA200.8
Uranium	< 0.1	0.1	µg/L	07-Feb-19	EPA200.8
Zinc	0.5	0.4	µg/L	07-Feb-19	EPA200.8

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
190051

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **567-2**

Taiga Sample ID: **002**

Client Project: MV2011L3-0001

Sample Type: Wastewater

Received Date: 04-Feb-19

Sampling Date: 01-Feb-19

Sampling Time: 14:00

Location: 567-2

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	77.5	0.005	mg/L	13-Feb-18	SM4500-NH3:G	
Biochemical Oxygen Demand		2	mg/L		SM5210:B	105
CBOD		2	mg/L		SM5210:B	105
Phosphorous, Total	5.45	0.002	mg/L	05-Feb-19	SM4500-P:D	
<u>Inorganics - Physicals</u>						
pH	6.81		pH units	04-Feb-19	SM4500-H:B	
Solids, Total Suspended	56	3	mg/L	07-Feb-19	SM2540:D	
<u>Major Ions</u>						
Nitrate as Nitrogen	0.08	0.01	mg/L	04-Feb-19	SM4110:B	
Nitrite as Nitrogen	< 0.01	0.01	mg/L	04-Feb-19	SM4110:B	
<u>Microbiology</u>						
Coliforms, Fecal		1	CFU/100mL		SM9222:D	105

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Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

190051

- CERTIFICATE OF ANALYSIS -

Client Sample ID: 567-2

Taiga Sample ID: 002

- DATA QUALIFIERS -

Data Qualifier Descriptions:

105 *Samples received past hold time; analysis not possible.*

*** Taiga analytical methods are based on the following standard analytical methods**

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency

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Sampling Location	Sample Collect Date	Sample Received Date	Test Group Name	Lab Section
567-1	01-Feb-19	04-Feb-19	DOC	Inorganics - Nutrients
567-1	01-Feb-19	04-Feb-19	TOC	Inorganics - Nutrients
567-1	01-Feb-19	04-Feb-19	Alkal	Inorganics - Physicals
567-1	01-Feb-19	04-Feb-19	Colour, Apparent	Inorganics - Physicals
567-1	01-Feb-19	04-Feb-19	TDS	Inorganics - Physicals
567-1	01-Feb-19	04-Feb-19	TSS	Inorganics - Physicals
567-1	01-Feb-19	04-Feb-19	Turb	Inorganics - Physicals
567-1	01-Feb-19	04-Feb-19	pH	Inorganics - Physicals
567-1	01-Feb-19	04-Feb-19	IC Anion	Major Ions
567-1	01-Feb-19	04-Feb-19	IC Anion	Major Ions
567-1	01-Feb-19	04-Feb-19	IC Cation	Major Ions
567-1	01-Feb-19	04-Feb-19	IC Anion	Major Ions
567-1	01-Feb-19	04-Feb-19	IC Cation	Major Ions
567-1	01-Feb-19	04-Feb-19	IC Anion	Major Ions
567-1	01-Feb-19	04-Feb-19	THM - ALS	Subcontracted Organics
567-1	01-Feb-19	04-Feb-19	THM - ALS	Subcontracted Organics
567-1	01-Feb-19	04-Feb-19	THM - ALS	Subcontracted Organics
567-1	01-Feb-19	04-Feb-19	THM - ALS	Subcontracted Organics
567-1	01-Feb-19	04-Feb-19	THM - ALS	Subcontracted Organics
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-1	01-Feb-19	04-Feb-19	ICPMS3	Trace Metals, Total
567-2	01-Feb-19	04-Feb-19	NH3-N	Inorganics - Nutrients
567-2	01-Feb-19	04-Feb-19	BOD	Inorganics - Nutrients
567-2	01-Feb-19	04-Feb-19	CBOD	Inorganics - Nutrients
567-2	01-Feb-19	04-Feb-19	TP	Inorganics - Nutrients
567-2	01-Feb-19	04-Feb-19	TSS	Inorganics - Physicals
567-2	01-Feb-19	04-Feb-19	pH	Inorganics - Physicals
567-2	01-Feb-19	04-Feb-19	IC Anion	Major Ions
567-2	01-Feb-19	04-Feb-19	IC Anion	Major Ions
567-2	01-Feb-19	04-Feb-19	FC - CFU	Microbiology

Parameter Name	Result Flag	Reported Result	Units
Organic Carbon, Dissolved		2.4	mg/L
Organic Carbon, Total		2.5	mg/L
Alkalinity, Total (as CaCO ₃)		80.9	mg/L
Colour, Apparent	<	5	CU
Solids, Total Dissolved		154	mg/L
Solids, Total Suspended	<	3	mg/L
Turbidity		0.14	NTU
pH		7.27	pH units
Chloride		15.0	mg/L
Fluoride	<	0.1	mg/L
Hardness		104	mg/L
Nitrate as Nitrogen		0.35	mg/L
Sodium		7.1	mg/L
Sulphate		23	mg/L
Bromodichloromethane		0.0027	mg/L
Bromoform	<	0.0050	mg/L
Chloroform		0.0160	mg/L
Dibromochloromethane	<	0.0010	mg/L
Trihalomethanes, Total		0.0187	mg/L
Aluminum		50.6	µg/L
Arsenic	<	0.2	µg/L
Barium		45.4	µg/L
Cadmium	<	0.04	µg/L
Chromium	<	0.1	µg/L
Copper		1.2	µg/L
Iron	<	5	ug/L
Lead	<	0.1	µg/L
Manganese		9.9	µg/L
Mercury	<	0.01	µg/L
Selenium		0.5	µg/L
Uranium	<	0.1	µg/L
Zinc		0.5	µg/L
Ammonia as Nitrogen		77.5	mg/L
Biochemical Oxygen Demand			mg/L
CBOD			mg/L
Phosphorous, Total		5.45	mg/L
Solids, Total Suspended		56	mg/L
pH		6.81	pH units
Nitrate as Nitrogen		0.08	mg/L
Nitrite as Nitrogen	<	0.01	mg/L
Coliforms, Fecal			CFU/100mL

CALC_MDL	Sample Result Qual	Analysis Result Qual	Analysis Date	Prep Method	Test Method
0.5			14-Feb-19		SM5310:B
0.5			14-Feb-19		SM5310:B
0.4			04-Feb-19		SM2320:B
5			04-Feb-19		SM2120:B
10			07-Feb-19		SM2540:C
3			07-Feb-19		SM2540:D
0.05			04-Feb-19		SM2130:B
			04-Feb-19		SM4500-H:B
0.7			04-Feb-19		SM4110:B
0.1			04-Feb-19		SM4110:B
0.7			04-Feb-19		SM4110:B
0.01			04-Feb-19		SM4110:B
0.1			04-Feb-19		SM4110:B
1			04-Feb-19		SM4110:B
0.001			12-Feb-19		SW-846
0.005			12-Feb-19		SW-846
0.001			12-Feb-19		SW-846
0.001			12-Feb-19		SW-846
0.005			12-Feb-19		SW-846
0.6			07-Feb-19		EPA200.8
0.2			07-Feb-19		EPA200.8
0.1			07-Feb-19		EPA200.8
0.04			07-Feb-19		EPA200.8
0.1			07-Feb-19		EPA200.8
0.2			07-Feb-19		EPA200.8
5			07-Feb-19		EPA200.8
0.1			07-Feb-19		EPA200.8
0.1			07-Feb-19		EPA200.8
0.01			07-Feb-19		EPA200.8
0.3			07-Feb-19		EPA200.8
0.1			07-Feb-19		EPA200.8
0.4			07-Feb-19		EPA200.8
0.005			13-Feb-18		SM4500-NH3:G
2	105				SM5210:B
2	105				SM5210:B
0.002			05-Feb-19		SM4500-P:D
3			07-Feb-19		SM2540:D
			04-Feb-19		SM4500-H:B
0.01			04-Feb-19		SM4110:B
0.01			04-Feb-19		SM4110:B
1	105				SM9222:D

REPORT STATUS	DL
Final	0.5
Final	0.5
Final	0.4
Final	5
Final	10
Final	3
Final	0.05
Final	
Final	0.7
Final	0.1
Final	0.7
Final	0.01
Final	0.1
Final	1
Final	0.001
Final	0.005
Final	0.001
Final	0.001
Final	0.005
Final	0.6
Final	0.2
Final	0.1
Final	0.04
Final	0.1
Final	0.2
Final	5
Final	0.1
Final	0.1
Final	0.01
Final	0.3
Final	0.1
Final	0.4
Final	0.005
Final	2
Final	2
Final	0.002
Final	3
Final	
Final	0.01
Final	0.01
Final	1