



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

**Taiga Batch No.:**  
**200178**

**- FINAL REPORT -**

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**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

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**Final report has been reviewed and approved by:**

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**Glen Hudy**  
Quality Assurance Officer

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**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:** Wednesday, May 06, 2020

**Print Date:** *Wednesday, May 06, 2020*

*Page 1 of 4*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
200178

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003 DISTRIBUTION**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Potable

Received Date: 29-Apr-20

Sampling Date: 28-Apr-20

Sampling Time: 10:30

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b>Organics</b>						
Bromodichloromethane	0.005	0.005	mg/L	05-May-20	EPA8260B	
Bromoform	< 0.005	0.005	mg/L	05-May-20	EPA8260B	
Chloroform	0.017	0.005	mg/L	05-May-20	EPA8260B	
Dibromochloromethane	< 0.005	0.005	mg/L	05-May-20	EPA8260B	
Trihalomethanes, Total	0.024	0.005	mg/L	05-May-20	EPA8260B	

ReportDate: Wednesday, May 06, 2020

Print Date: *Wednesday, May 06, 2020*

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# Taiga Environmental Laboratory

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

Taiga Batch No.:  
**200178**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003 RETURN**

Taiga Sample ID: **002**

Client Project: S18L3-003

Sample Type: Potable

Received Date: 29-Apr-20

Sampling Date: 28-Apr-20

Sampling Time: 10:30

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b><u>Organics</u></b>						
Bromodichloromethane	0.005	0.005	mg/L	05-May-20	EPA8260B	
Bromoform	< 0.005	0.005	mg/L	05-May-20	EPA8260B	
Chloroform	0.018	0.005	mg/L	05-May-20	EPA8260B	
Dibromochloromethane	< 0.005	0.005	mg/L	05-May-20	EPA8260B	
Trihalomethanes, Total	0.025	0.005	mg/L	05-May-20	EPA8260B	

ReportDate: Wednesday, May 06, 2020

Print Date: **Wednesday, May 06, 2020**

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

**Taiga Batch No.:**

**200178**

**- CERTIFICATE OF ANALYSIS -**

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**Client Sample ID: S18L3-003 RETURN**

**Taiga Sample ID: 002**

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**\* 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

**ReportDate:** Wednesday, May 06, 2020

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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.:**  
**200215**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**Final report has been reviewed and approved by:**

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**Glen Hudy**  
Quality Assurance Officer

---

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**ReportDate:** Tuesday, May 26, 2020

**Print Date:** *Wednesday, May 27, 2020*

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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.:  
**200215**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Wastewater

Received Date: 20-May-20

Sampling Date: 19-May-20

Sampling Time: 11:30

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
Biochemical Oxygen Demand	7	2	mg/L	20-May-20	SM5210:B	
CBOD	7	2	mg/L	20-May-20	SM5210:B	
<b><u>Inorganics - Physicals</u></b>						
pH	6.95		pH units	20-May-20	SM4500-H:B	
Solids, Total Suspended	6	3	mg/L	21-May-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	18	1	CFU/100mL	20-May-20	SM9222:D	
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	20-May-20	EPA1664A	
Oil and Grease, visible	Non-visible			20-May-20	Visual Exam	

ReportDate: Tuesday, May 26, 2020

Print Date: **Wednesday, May 27, 2020**

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## Taiga Environmental Laboratory

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

Taiga Batch No.:

**200215**

### - CERTIFICATE OF ANALYSIS -

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Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

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

SM - Standard Methods for the Examination of Water and Wastewater

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ReportDate: Tuesday, May 26, 2020

Print Date: *Wednesday, May 27, 2020*

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

**Taiga Batch No.:**  
**200225**

**- FINAL REPORT -**

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**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

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**Final report has been reviewed and approved by:**

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**Glen Hudy**  
Quality Assurance Officer

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**ReportDate:** Monday, June 01, 2020

**Print Date:** *Monday, June 01, 2020*

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

Taiga Batch No.:  
200225

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(2)**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 25-May-20

Sampling Date: 23-May-20

Sampling Time: 10:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	0.023	0.005	mg/L	27-May-20	SM4500-NH3:G	
Biochemical Oxygen Demand		2	mg/L		SM5210:B	105
CBOD		2	mg/L		SM5210:B	105
Nitrogen, Total	0.83	0.06	mg/L	27-May-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	30.2	0.5	mg/L	26-May-20	SM5310:B	
Phosphorous, Total	0.046	0.002	mg/L	26-May-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	204	0.4	µS/cm	25-May-20	SM2510:B	
pH	7.18		pH units	25-May-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	26-May-20	SM2540:D	
<b><u>Major Ions</u></b>						
Calcium	27.2	0.1	mg/L	25-May-20	SM4110:B	
Magnesium	7.6	0.1	mg/L	25-May-20	SM4110:B	
Nitrate as Nitrogen	0.23	0.01	mg/L	25-May-20	SM4110:B	

ReportDate: Monday, June 01, 2020

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**- CERTIFICATE OF ANALYSIS -**

**Client Sample ID: S18L3-003-(2)**

**Taiga Sample ID: 001**

Nitrate+Nitrite as Nitrogen	0.28	0.01	mg/L	25-May-20	SM4110:B
Nitrite as Nitrogen	0.05	0.01	mg/L	25-May-20	SM4110:B
Potassium	1.0	0.1	mg/L	25-May-20	SM4110:B
Sodium	4.2	0.1	mg/L	25-May-20	SM4110:B
Sulphate	28	1	mg/L	25-May-20	SM4110:B

**Microbiology**

Coliforms, Fecal		1	CFU/100mL	SM9222:D	105
Coliforms, Total		1.0	MPN/100mL	SM9223:B	105

**Organics**

Hexane Extractable Material	< 2.0	2.0	mg/L	27-May-20	EPA1664A
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**Subcontracted Organics**

Phenols, Total	< 0.0010	0.001	mg/L	29-May-20	AB ENV.06537
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**Trace Metals, Total**

Arsenic	0.6	0.2	µg/L	28-May-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	28-May-20	EPA200.8
Chromium	0.1	0.1	µg/L	28-May-20	EPA200.8
Copper	0.5	0.2	µg/L	28-May-20	EPA200.8
Iron	248	5	µg/L	28-May-20	EPA200.8
Lead	< 0.1	0.1	µg/L	28-May-20	EPA200.8
Mercury	0.01	0.01	µg/L	28-May-20	EPA200.8
Nickel	0.8	0.1	µg/L	28-May-20	EPA200.8
Silver	< 0.1	0.1	µg/L	28-May-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	28-May-20	EPA200.8
Titanium	1.4	0.1	µg/L	28-May-20	EPA200.8
Zinc	< 5.0	5	µg/L	28-May-20	EPA200.8

**ReportDate:** Monday, June 01, 2020

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**Client Sample ID: S18L3-003-(2)**

**Taiga Sample ID: 001**

**ReportDate:** Monday, June 01, 2020

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*Page 4 of 7*



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Taiga Batch No.:  
**200225**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(3)**

Taiga Sample ID: **002**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 25-May-20

Sampling Date: 23-May-20

Sampling Time: 10:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	0.014	0.005	mg/L	27-May-20	SM4500-NH3:G	
Biochemical Oxygen Demand		2	mg/L		SM5210:B	105
CBOD		2	mg/L		SM5210:B	105
Nitrogen, Total	0.93	0.06	mg/L	27-May-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	22.7	0.5	mg/L	26-May-20	SM5310:B	
Phosphorous, Total	0.030	0.002	mg/L	26-May-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	242	0.4	µS/cm	25-May-20	SM2510:B	
pH	7.61		pH units	25-May-20	SM4500-H:B	
Solids, Total Suspended	4	3	mg/L	26-May-20	SM2540:D	
<b><u>Major Ions</u></b>						
Calcium	31.1	0.1	mg/L	25-May-20	SM4110:B	
Magnesium	9.0	0.1	mg/L	25-May-20	SM4110:B	
Nitrate as Nitrogen	0.25	0.01	mg/L	25-May-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.29	0.01	mg/L	25-May-20	SM4110:B	
Nitrite as Nitrogen	0.05	0.01	mg/L	25-May-20	SM4110:B	

ReportDate: Monday, June 01, 2020

Print Date: **Monday, June 01, 2020**



# Taiga Environmental Laboratory

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**200225**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(3)**

Taiga Sample ID: **002**

Potassium	0.9	0.1	mg/L	25-May-20	SM4110:B
Sodium	7.8	0.1	mg/L	25-May-20	SM4110:B
Sulphate	31	1	mg/L	25-May-20	SM4110:B

### Microbiology

Coliforms, Fecal		1	CFU/100mL	SM9222:D	105
Coliforms, Total		1.0	MPN/100mL	SM9223:B	105

### Organics

Hexane Extractable Material	< 2.0	2.0	mg/L	27-May-20	EPA1664A
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### Subcontracted Organics

Phenols, Total	< 0.0010	0.001	mg/L	29-May-20	AB ENV.06537
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### Trace Metals, Total

Arsenic	0.7	0.2	µg/L	28-May-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	28-May-20	EPA200.8
Chromium	0.3	0.1	µg/L	28-May-20	EPA200.8
Copper	0.9	0.2	µg/L	28-May-20	EPA200.8
Iron	420	5	µg/L	28-May-20	EPA200.8
Lead	0.2	0.1	µg/L	28-May-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	28-May-20	EPA200.8
Nickel	1.3	0.1	µg/L	28-May-20	EPA200.8
Silver	< 0.1	0.1	µg/L	28-May-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	28-May-20	EPA200.8
Titanium	4.0	0.1	µg/L	28-May-20	EPA200.8
Zinc	< 5.0	5	µg/L	28-May-20	EPA200.8

ReportDate: Monday, June 01, 2020

Print Date: *Monday, June 01, 2020*



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

Taiga Batch No.:  
**200225**

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**- CERTIFICATE OF ANALYSIS -**

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Client Sample ID: **S18L3-003-(3)**

Taiga Sample ID: **002**

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**- DATA QUALIFIERS -**

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*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

ReportDate: Monday, June 01, 2020

Print Date: *Monday, June 01, 2020*

*Page 7 of 7*



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4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9  
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**Taiga Batch No.:**  
**200233**

**- FINAL REPORT -**

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**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

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**Final report has been reviewed and approved by:**

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**Glen Hudy**  
Quality Assurance Officer

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**ReportDate:** Thursday, June 04, 2020

**Print Date:** *Friday, June 05, 2020*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200233**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(2)**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 27-May-20

Sampling Date: 26-May-20

Sampling Time: 11:30

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
Biochemical Oxygen Demand	3	2	mg/L	28-May-20	SM5210:B	
CBOD	3	2	mg/L	28-May-20	SM5210:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	< 1	1	CFU/100mL	27-May-20	SM9222:D	
Coliforms, Total	50.4	1.0	MPN/100mL	27-May-20	SM9223:B	

ReportDate: Thursday, June 04, 2020

Print Date: *Friday, June 05, 2020*

*Page 2 of 4*





# Taiga Environmental Laboratory

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

Taiga Batch No.:  
**200233**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(3)**

Taiga Sample ID: **002**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 27-May-20

Sampling Date: 26-May-20

Sampling Time: 11:30

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b><u>Inorganics - Nutrients</u></b>						
Biochemical Oxygen Demand	3	2	mg/L	28-May-20	SM5210:B	
CBOD	4	2	mg/L	28-May-20	SM5210:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	4	1	CFU/100mL	27-May-20	SM9222:D	
Coliforms, Total	387	1.0	MPN/100mL	27-May-20	SM9223:B	

ReportDate: Thursday, June 04, 2020

Print Date: *Friday, June 05, 2020*



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Taiga Batch No.:

**200233**

### - CERTIFICATE OF ANALYSIS -

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Client Sample ID: **S18L3-003-(3)**

Taiga Sample ID: **002**

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

**Taiga Batch No.:**  
**200287**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**Final report has been reviewed and approved by:**

A handwritten signature in black ink, appearing to read "Glen Hudy". The signature is written in a cursive style.

---

**Glen Hudy**  
**Quality Assurance Officer**

---

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**ReportDate:** Tuesday, June 23, 2020

**Print Date:** *Tuesday, June 23, 2020*

*Page 1 of 4*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200287**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 16-Jun-20

Sampling Date: 15-Jun-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	0.012	0.005	mg/L	23-Jun-20	SM4500-NH3:G	
Biochemical Oxygen Demand	10	2	mg/L	16-Jun-20	SM5210:B	
CBOD	10	2	mg/L	16-Jun-20	SM5210:B	
Nitrogen, Total	2.05	0.06	mg/L	17-Jun-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	25.4	0.5	mg/L	17-Jun-20	SM5310:B	
Phosphorous, Total	0.383	0.002	mg/L	17-Jun-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	268	0.4	µS/cm	16-Jun-20	SM2510:B	
pH	8.56		pH units	16-Jun-20	SM4500-H:B	
Solids, Total Suspended	94	3	mg/L	16-Jun-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	4	1	CFU/100mL	16-Jun-20	SM9222:D	
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	17-Jun-20	EPA1664A	
Oil and Grease, visible	Non-visible			16-Jun-20	Visual Exam	

ReportDate: Tuesday, June 23, 2020

Print Date: **Tuesday, June 23, 2020**



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200287**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

#### Subcontracted Inorganics

Nitrate as Nitrogen	< 0.0200	0.020	mg/L	19-Aug-20	EPA300.1
Nitrite as N	< 0.0100	0.010	mg/L	19-Aug-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	19-Aug-20	EPA300.1

ReportDate: Tuesday, June 23, 2020

Print Date: *Tuesday, June 23, 2020*

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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.:

**200287**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

---

**\* 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

ReportDate: Tuesday, June 23, 2020

Print Date: *Tuesday, June 23, 2020*

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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.:**  
**200315**

**- FINAL REPORT -**

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

**Final report has been reviewed and approved by:**

**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:** Tuesday, July 14, 2020

**Print Date:** *Tuesday, July 14, 2020*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200315**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 24-Jun-20

Sampling Date: 23-Jun-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	5	2	mg/L	24-Jun-20	SM5210:B	
Nitrogen, Total	1.36	0.06	mg/L	26-Jun-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	22.2	0.5	mg/L	25-Jun-20	SM5310:B	
Phosphorous, Total	0.317	0.002	mg/L	29-Jun-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	295	0.4	µS/cm	25-Jun-20	SM2510:B	
pH	7.93		pH units	25-Jun-20	SM4500-H:B	
Solids, Total Suspended	6	3	mg/L	29-Jun-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	18	1	CFU/100mL	24-Jun-20	SM9222:D	
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	02-Jul-20	EPA1664A	
Oil and Grease, visible	Non-visible			24-Jun-20	Visual Exam	
<b><u>Subcontracted Inorganics</u></b>						
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	29-Jun-20	EPA300.1	

ReportDate: Tuesday, July 14, 2020

Print Date: *Tuesday, July 14, 2020*

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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.:**  
**200315**

## - CERTIFICATE OF ANALYSIS -

---

**Client Sample ID: S18L3-003-(1)**

**Taiga Sample ID: 001**

Nitrite as N	< 0.0100	0.010	mg/L	29-Jun-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	29-Jun-20	EPA300.1

**ReportDate:** Tuesday, July 14, 2020

**Print Date:** *Tuesday, July 14, 2020*

*Page 3 of 4*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200315**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

---

**\* 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

ReportDate: Tuesday, July 14, 2020

Print Date: *Tuesday, July 14, 2020*

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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.:**  
**200366**

**- FINAL REPORT -**

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

**Final report has been reviewed and approved by:**

**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:** Thursday, July 23, 2020

**Print Date:** *Thursday, July 23, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200366**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 02-Jul-20

Sampling Date: 30-Jun-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	7	2	mg/L	03-Jul-20	SM5210:B	
Nitrogen, Total	1.60	0.06	mg/L	03-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	22.3	0.5	mg/L	08-Jul-20	SM5310:B	
Phosphorous, Total	0.302	0.002	mg/L	08-Jul-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	296	0.4	µS/cm	02-Jul-20	SM2510:B	
pH	7.80		pH units	02-Jul-20	SM4500-H:B	
Solids, Total Suspended	4	3	mg/L	06-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal		1	CFU/100mL		SM9222:D	105
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	09-Jul-20	EPA1664A	
Oil and Grease, visible	Non-visible			02-Jul-20	Visual Exam	
<b><u>Subcontracted Inorganics</u></b>						
Nitrate as Nitrogen	0.0220	0.020	mg/L	06-Jul-20	EPA300.1	

ReportDate: Thursday, July 23, 2020

Print Date: **Thursday, July 23, 2020**



# Taiga Environmental Laboratory

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

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

**Taiga Batch No.:**  
**200366**

## - CERTIFICATE OF ANALYSIS -

---

**Client Sample ID: S18L3-003-(1)**

**Taiga Sample ID: 001**

Nitrite as N	< 0.0100	0.010	mg/L	06-Jul-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	0.0220	0.022	mg/L	06-Jul-20	EPA300.1

**ReportDate:** Thursday, July 23, 2020

**Print Date:** *Thursday, July 23, 2020*

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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.:  
**200366**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-(2)**

Taiga Sample ID: **002**

Client Project: S18L3-003  
 Sample Type: Freshwater  
 Received Date: 02-Jul-20  
 Sampling Date: 30-Jun-20  
 Sampling Time: 11:00  
 Location: Norman Wells  
 Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	6	2	mg/L	03-Jul-20	SM5210:B	
Nitrogen, Total	0.79	0.06	mg/L	03-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	22.2	0.5	mg/L	08-Jul-20	SM5310:B	
Phosphorous, Total	0.045	0.002	mg/L	08-Jul-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	393	0.4	µS/cm	02-Jul-20	SM2510:B	
pH	7.60		pH units	02-Jul-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	06-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal		1	CFU/100mL		SM9222:D	105
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	09-Jul-20	EPA1664A	
<b><u>Subcontracted Inorganics</u></b>						
Calcium	60.5	0.05	mg/L	20-Jul-20	EPA200.2	
Magnesium	18.4	0.005	mg/L	20-Jul-20	EPA200.2	
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	06-Jul-20	EPA300.1	

ReportDate: Thursday, July 23, 2020  
 Print Date: *Thursday, July 23, 2020*



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

Taiga Batch No.:  
**200366**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-(2)**

Taiga Sample ID: **002**

Nitrite as N	< 0.0100	0.010	mg/L	06-Jul-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	06-Jul-20	EPA300.1
Potassium	0.941	0.05	mg/L	20-Jul-20	EPA200.2
Sodium	14.3	0.05	mg/L	20-Jul-20	EPA200.2
Sulphate	83.3	0.3	mg/L	06-Jul-20	EPA300.1
<b><u>Subcontracted Organics</u></b>					
Phenols, Total	< 0.0010	0.001	mg/L	08-Jul-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Arsenic	0.7	0.2	µg/L	07-Jul-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	07-Jul-20	EPA200.8
Chromium	0.2	0.1	µg/L	07-Jul-20	EPA200.8
Copper	0.4	0.2	µg/L	07-Jul-20	EPA200.8
Iron	246	5	µg/L	07-Jul-20	EPA200.8
Lead	< 0.1	0.1	µg/L	07-Jul-20	EPA200.8
Mercury	0.01	0.01	µg/L	07-Jul-20	EPA200.8
Nickel	1.4	0.1	µg/L	07-Jul-20	EPA200.8
Silver	< 0.1	0.1	µg/L	07-Jul-20	EPA200.8
Uranium	0.3	0.1	µg/L	07-Jul-20	EPA200.8
Zinc	< 5.0	5	µg/L	07-Jul-20	EPA200.8

ReportDate: Thursday, July 23, 2020  
Print Date: *Thursday, July 23, 2020*

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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.:  
**200366**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(3)**

Taiga Sample ID: **003**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 02-Jul-20

Sampling Date: 30-Jun-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	6	2	mg/L	03-Jul-20	SM5210:B	
Nitrogen, Total	0.83	0.06	mg/L	03-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	23.6	0.5	mg/L	08-Jul-20	SM5310:B	
Phosphorous, Total	0.015	0.002	mg/L	08-Jul-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	467	0.4	µS/cm	02-Jul-20	SM2510:B	
pH	8.08		pH units	02-Jul-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	06-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal		1	CFU/100mL		SM9222:D	105
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	09-Jul-20	EPA1664A	
<b><u>Subcontracted Inorganics</u></b>						
Calcium	52.6	0.05	mg/L	20-Jul-20	EPA200.2	
Magnesium	14.9	0.005	mg/L	20-Jul-20	EPA200.2	
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	06-Jul-20	EPA300.1	

ReportDate: Thursday, July 23, 2020

Print Date: **Thursday, July 23, 2020**





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

Taiga Batch No.:  
**200366**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-(3)**

Taiga Sample ID: **003**

Nitrite as N	< 0.0100	0.010	mg/L	06-Jul-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	06-Jul-20	EPA300.1
Potassium	1.33	0.05	mg/L	20-Jul-20	EPA200.2
Sodium	8.90	0.05	mg/L	20-Jul-20	EPA200.2
Sulphate	60.6	0.3	mg/L	06-Jul-20	EPA300.1
<b><u>Subcontracted Organics</u></b>					
Phenols, Total	< 0.0010	0.001	mg/L	08-Jul-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Arsenic	0.7	0.2	µg/L	07-Jul-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	07-Jul-20	EPA200.8
Chromium	0.2	0.1	µg/L	07-Jul-20	EPA200.8
Copper	0.5	0.2	µg/L	07-Jul-20	EPA200.8
Iron	270	5	µg/L	07-Jul-20	EPA200.8
Lead	0.1	0.1	µg/L	07-Jul-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	07-Jul-20	EPA200.8
Nickel	1.3	0.1	µg/L	07-Jul-20	EPA200.8
Silver	< 0.1	0.1	µg/L	07-Jul-20	EPA200.8
Uranium	0.6	0.1	µg/L	07-Jul-20	EPA200.8
Zinc	< 5.0	5	µg/L	07-Jul-20	EPA200.8

ReportDate: Thursday, July 23, 2020  
Print Date: *Thursday, July 23, 2020*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

200366

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-(3)**

Taiga Sample ID: **003**

---

### - DATA QUALIFIERS -

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*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

ReportDate: Thursday, July 23, 2020

Print Date: *Thursday, July 23, 2020*

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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.:**  
**200385**

**- FINAL REPORT -**

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

**Final report has been reviewed and approved by:**

**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, August 07, 2020

**Print Date:** *Friday, August 07, 2020*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
200385

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 07-Jul-20

Sampling Date: 06-Jul-20

Sampling Time: 10:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	3	2	mg/L	08-Jul-20	SM5210:B	
Nitrogen, Total	1.76	0.06	mg/L	07-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	22.9	0.5	mg/L	08-Jul-20	SM5310:B	
Phosphorous, Total	0.361	0.002	mg/L	08-Jul-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	309	0.4	µS/cm	07-Jul-20	SM2510:B	
pH	7.43		pH units	07-Jul-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	09-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	9	1	CFU/100mL	07-Jul-20	SM9222:D	
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	10-Jul-20	EPA1664A	
Oil and Grease, visible	Non-visible			07-Jul-20	Visual Exam	
<b><u>Subcontracted Inorganics</u></b>						
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	05-Aug-20	EPA300.1	

ReportDate: Friday, August 07, 2020

Print Date: *Friday, August 07, 2020*

*Page 2 of 4*



# Taiga Environmental Laboratory

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

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

**Taiga Batch No.:**  
**200385**

## - CERTIFICATE OF ANALYSIS -

---

**Client Sample ID: S18L3-003-(1)**

**Taiga Sample ID: 001**

Nitrite as N	< 0.0100	0.010	mg/L	05-Aug-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	05-Aug-20	EPA300.1

**ReportDate:** Friday, August 07, 2020

**Print Date:** *Friday, August 07, 2020*

*Page 3 of 4*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200385**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

---

**\* 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

ReportDate: Friday, August 07, 2020

Print Date: *Friday, August 07, 2020*

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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.:**  
**200414**

**- FINAL REPORT -**

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**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**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:** Tuesday, July 28, 2020

**Print Date:** *Tuesday, July 28, 2020*

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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.:  
**200414**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 14-Jul-20

Sampling Date: 13-Jul-20

Sampling Time: 9:30

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	8	2	mg/L	15-Jul-20	SM5210:B	
Nitrogen, Total	3.07	0.06	mg/L	16-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	24.8	0.5	mg/L	15-Jul-20	SM5310:B	
Phosphorous, Total	0.970	0.002	mg/L	15-Jul-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	310	0.4	µS/cm	14-Jul-20	SM2510:B	
pH	7.67		pH units	14-Jul-20	SM4500-H:B	
Solids, Total Suspended	50	3	mg/L	15-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	7	1	CFU/100mL	14-Jul-20	SM9222:D	
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	20-Jul-20	EPA1664A	
Oil and Grease, visible	Non-visible			14-Jul-20	Visual Exam	
<b><u>Subcontracted Inorganics</u></b>						
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	17-Jul-20	EPA300.1	

ReportDate: Tuesday, July 28, 2020

Print Date: *Tuesday, July 28, 2020*





## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200414**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Nitrite as N	< 0.0100	0.010	mg/L	17-Jul-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	17-Jul-20	EPA300.1

ReportDate: Tuesday, July 28, 2020

Print Date: *Tuesday, July 28, 2020*

*Page 3 of 4*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200414**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

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**\* 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

ReportDate: Tuesday, July 28, 2020

Print Date: *Tuesday, July 28, 2020*

*Page 4 of 4*



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

**Taiga Batch No.:**  
**200452**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**Final report has been reviewed and approved by:**

---

**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
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- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

**ReportDate:** Friday, July 31, 2020

**Print Date:** *Friday, July 31, 2020*

*Page 1 of 4*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200452**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 21-Jul-20

Sampling Date: 20-Jul-20

Sampling Time: 10:45

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	3	2	mg/L	22-Jul-20	SM5210:B	
Nitrogen, Total	1.75	0.06	mg/L	21-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	23.6	0.5	mg/L	22-Jul-20	SM5310:B	
Phosphorous, Total	0.725	0.002	mg/L	22-Jul-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	309	0.4	µS/cm	21-Jul-20	SM2510:B	
pH	7.70		pH units	21-Jul-20	SM4500-H:B	
Solids, Total Suspended	10	3	mg/L	22-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	3	1	CFU/100mL	21-Jul-20	SM9222:D	
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	24-Jul-20	EPA1664A	
Oil and Grease, visible	Non-visible			21-Jul-20	Visual Exam	
<b><u>Subcontracted Inorganics</u></b>						
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	28-Jul-20	EPA300.1	

ReportDate: Friday, July 31, 2020

Print Date: **Friday, July 31, 2020**

Page 2 of 4



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200452**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Nitrite as N	< 0.0100	0.010	mg/L	28-Jul-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	28-Jul-20	EPA300.1

ReportDate: Friday, July 31, 2020

Print Date: *Friday, July 31, 2020*

*Page 3 of 4*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200452**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

---

**\* 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

ReportDate: Friday, July 31, 2020

Print Date: *Friday, July 31, 2020*

*Page 4 of 4*



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

**Taiga Batch No.:**  
**200490**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**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:**

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  - 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:** Tuesday, August 25, 2020

**Print Date:** *Tuesday, August 25, 2020*

*Page 1 of 10*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200490**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L-003-1**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 28-Jul-20

Sampling Date: 27-Jul-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	6	2	mg/L	28-Jul-20	SM5210:B	
Nitrogen, Total	3.11	0.06	mg/L	29-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	23.3	0.5	mg/L	06-Aug-20	SM5310:B	
Phosphorous, Total	0.551	0.002	mg/L	01-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	324	0.4	µS/cm	28-Jul-20	SM2510:B	
pH	7.38		pH units	28-Jul-20	SM4500-H:B	
Solids, Total Suspended	29	3	mg/L	30-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	< 1	1	CFU/100mL	28-Jul-20	SM9222:D	
<b><u>Organics</u></b>						
Oil and Grease, visible	Non-visible			28-Jul-20	Visual Exam	
<b><u>Subcontracted Inorganics</u></b>						
Calcium	38.7	0.05	mg/L	21-Aug-20	EPA200.2	
Magnesium	11.0	0.005	mg/L	21-Aug-20	EPA200.2	

ReportDate: Tuesday, August 25, 2020

Print Date: *Tuesday, August 25, 2020*





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

Taiga Batch No.:  
**200490**

**- CERTIFICATE OF ANALYSIS -**

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**Client Sample ID: S18L-003-1**

**Taiga Sample ID: 001**

Nitrate as Nitrogen	< 0.0200	0.020	mg/L	04-Aug-20	EPA300.1
Nitrite as N	< 0.0100	0.010	mg/L	04-Aug-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	04-Aug-20	EPA300.1
Potassium	3.70	0.05	mg/L	21-Aug-20	EPA200.2
Sodium	13.4	0.05	mg/L	21-Aug-20	EPA200.2
Sulphate	7.87	0.3	mg/L	04-Aug-20	EPA300.1
<b><u>Subcontracted Organics</u></b>					
Hexane Extractable Material	< 5.0	5	mg/L	16-Aug-20	APHA 5520B

**ReportDate:** Tuesday, August 25, 2020

**Print Date:** *Tuesday, August 25, 2020*

*Page 3 of 10*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200490**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L-003-2**

Taiga Sample ID: **002**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 28-Jul-20

Sampling Date: 27-Jul-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	< 2	2	mg/L	28-Jul-20	SM5210:B	
Nitrogen, Total	0.80	0.06	mg/L	29-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	21.4	0.5	mg/L	06-Aug-20	SM5310:B	
Phosphorous, Total	0.064	0.002	mg/L	01-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	495	0.4	µS/cm	28-Jul-20	SM2510:B	
pH	7.47		pH units	28-Jul-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	30-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	10	1	CFU/100mL	28-Jul-20	SM9222:D	
<b><u>Subcontracted Inorganics</u></b>						
Calcium	67.6	0.05	mg/L	21-Aug-20	EPA200.2	
Magnesium	19.9	0.005	mg/L	21-Aug-20	EPA200.2	
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	04-Aug-20	EPA300.1	
Nitrite as N	< 0.0100	0.010	mg/L	04-Aug-20	EPA300.1	
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	04-Aug-20	EPA300.1	

ReportDate: Tuesday, August 25, 2020

Print Date: *Tuesday, August 25, 2020*



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

Taiga Batch No.:  
200490

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L-003-2**

Taiga Sample ID: **002**

Potassium	1.61	0.05	mg/L	21-Aug-20	EPA200.2
Sodium	13.6	0.05	mg/L	21-Aug-20	EPA200.2
Sulphate	83.4	0.3	mg/L	04-Aug-20	EPA300.1
<b><u>Subcontracted Organics</u></b>					
Hexane Extractable Material	< 5.0	5	mg/L	16-Aug-20	APHA 5520B
Phenols, Total	< 0.0010	0.001	mg/L	06-Aug-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	127	5	µg/L	05-Aug-20	EPA200.8
Antimony	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Arsenic	1.1	0.2	µg/L	05-Aug-20	EPA200.8
Barium	55.3	0.1	µg/L	05-Aug-20	EPA200.8
Beryllium	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Bismuth	< 0.2	0.2	µg/L	05-Aug-20	EPA200.8
Boron	12.8	0.9	µg/L	05-Aug-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Cesium	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Chromium	0.3	0.1	µg/L	05-Aug-20	EPA200.8
Cobalt	0.2	0.1	µg/L	05-Aug-20	EPA200.8
Copper	0.4	0.2	µg/L	05-Aug-20	EPA200.8
Iron	364	5	µg/L	05-Aug-20	EPA200.8
Lead	0.1	0.1	µg/L	05-Aug-20	EPA200.8
Lithium	4.9	0.2	µg/L	05-Aug-20	EPA200.8
Manganese	38.3	0.1	µg/L	05-Aug-20	EPA200.8
Mercury	0.01	0.01	µg/L	05-Aug-20	EPA200.8
Molybdenum	0.8	0.1	µg/L	05-Aug-20	EPA200.8

ReportDate: Tuesday, August 25, 2020

Print Date: *Tuesday, August 25, 2020*

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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.:  
**200490**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L-003-2**

Taiga Sample ID: **002**

Nickel	1.4	0.1	µg/L	05-Aug-20	EPA200.8
Rubidium	1.2	0.1	µg/L	05-Aug-20	EPA200.8
Selenium	< 0.5	0.5	µg/L	05-Aug-20	EPA200.8
Silver	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Strontium	186	0.1	µg/L	05-Aug-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Tin	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Titanium	1.0	0.1	µg/L	05-Aug-20	EPA200.8
Uranium	0.4	0.1	µg/L	05-Aug-20	EPA200.8
Vanadium	0.5	0.1	µg/L	05-Aug-20	EPA200.8
Zinc	< 5.0	5	µg/L	05-Aug-20	EPA200.8

ReportDate: Tuesday, August 25, 2020

Print Date: *Tuesday, August 25, 2020*

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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.:  
**200490**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Client Project: S18L3-003-3

Sample Type: Freshwater

Received Date: 28-Jul-20

Sampling Date: 27-Jul-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	< 2	2	mg/L	28-Jul-20	SM5210:B	
Nitrogen, Total	0.89	0.06	mg/L	29-Jul-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	23.0	0.5	mg/L	06-Aug-20	SM5310:B	
Phosphorous, Total	0.009	0.002	mg/L	01-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	502	0.4	µS/cm	28-Jul-20	SM2510:B	
pH	8.16		pH units	28-Jul-20	SM4500-H:B	
Solids, Total Suspended	6	3	mg/L	30-Jul-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	1	1	CFU/100mL	28-Jul-20	SM9222:D	
<b><u>Subcontracted Inorganics</u></b>						
Calcium	64.3	0.05	mg/L	21-Aug-20	EPA200.2	
Magnesium	21.6	0.005	mg/L	21-Aug-20	EPA200.2	
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	04-Aug-20	EPA300.1	
Nitrite as N	< 0.0100	0.010	mg/L	04-Aug-20	EPA300.1	
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	04-Aug-20	EPA300.1	

ReportDate: Tuesday, August 25, 2020

Print Date: *Tuesday, August 25, 2020*



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

Taiga Batch No.:  
200490

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Potassium	1.09	0.05	mg/L	21-Aug-20	EPA200.2
Sodium	18.4	0.05	mg/L	21-Aug-20	EPA200.2
Sulphate	92.4	0.3	mg/L	04-Aug-20	EPA300.1
<b><u>Subcontracted Organics</u></b>					
Hexane Extractable Material	< 5.0	5	mg/L	16-Aug-20	APHA 5520B
Phenols, Total	< 0.0010	0.001	mg/L	06-Aug-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	21.0	5	µg/L	05-Aug-20	EPA200.8
Antimony	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Arsenic	1.1	0.2	µg/L	05-Aug-20	EPA200.8
Barium	48.8	0.1	µg/L	05-Aug-20	EPA200.8
Beryllium	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Bismuth	< 0.2	0.2	µg/L	05-Aug-20	EPA200.8
Boron	12.5	0.9	µg/L	05-Aug-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Cesium	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Chromium	0.2	0.1	µg/L	05-Aug-20	EPA200.8
Cobalt	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Copper	0.4	0.2	µg/L	05-Aug-20	EPA200.8
Iron	116	5	µg/L	05-Aug-20	EPA200.8
Lead	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Lithium	6.4	0.2	µg/L	05-Aug-20	EPA200.8
Manganese	12.4	0.1	µg/L	05-Aug-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	05-Aug-20	EPA200.8
Molybdenum	0.8	0.1	µg/L	05-Aug-20	EPA200.8

ReportDate: Tuesday, August 25, 2020

Print Date: *Tuesday, August 25, 2020*



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

Taiga Batch No.:  
**200490**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Nickel	1.1	0.1	µg/L	05-Aug-20	EPA200.8
Rubidium	0.6	0.1	µg/L	05-Aug-20	EPA200.8
Selenium	< 0.5	0.5	µg/L	05-Aug-20	EPA200.8
Silver	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Strontium	184	0.1	µg/L	05-Aug-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Tin	< 0.1	0.1	µg/L	05-Aug-20	EPA200.8
Titanium	0.4	0.1	µg/L	05-Aug-20	EPA200.8
Uranium	0.5	0.1	µg/L	05-Aug-20	EPA200.8
Vanadium	0.3	0.1	µg/L	05-Aug-20	EPA200.8
Zinc	< 5.0	5	µg/L	05-Aug-20	EPA200.8

ReportDate: Tuesday, August 25, 2020

Print Date: *Tuesday, August 25, 2020*

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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.:**

**200490**

**- CERTIFICATE OF ANALYSIS -**

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**Client Sample ID: S18L3-003-3**

**Taiga Sample ID: 003**

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**\* 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

**ReportDate:** Tuesday, August 25, 2020

**Print Date:** *Tuesday, August 25, 2020*

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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.:**  
**200522**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**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
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- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

**ReportDate:** Friday, August 28, 2020

**Print Date:** *Friday, August 28, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200522**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID:

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Water

Received Date: 05-Aug-20

Sampling Date: 04-Aug-20

Sampling Time: 10:30

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	22	2	mg/L	06-Aug-20	SM5210:B	55
Nitrogen, Total	10.6	0.6	mg/L	06-Aug-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	42.2	0.5	mg/L	08-Aug-20	SM5310:B	
Phosphorous, Total	2.76	0.002	mg/L	07-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO <sub>3</sub> )	134	0.4	mg/L	05-Aug-20	SM2320:B	
Conductivity, Specific (@25C)	331	0.4	µS/cm	05-Aug-20	SM2510:B	
pH	7.27		pH units	05-Aug-20	SM4500-H:B	
Solids, Total Suspended	277	3	mg/L	07-Aug-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	23	1	CFU/100mL	05-Aug-20	SM9222:D	88
<b><u>Organics</u></b>						
Hexane Extractable Material	2.3	2.0	mg/L	17-Aug-20	EPA1664A	
Oil and Grease, visible	Non-visible			28-Aug-20	Visual Exam	
<b><u>Subcontracted Inorganics</u></b>						

ReportDate: Friday, August 28, 2020

Print Date: *Friday, August 28, 2020*

Page 2 of 4



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200522**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID:

Taiga Sample ID: **001**

Nitrate as Nitrogen	0.0065	0.005	mg/L	18-Aug-20	EPA300.1
Nitrite as N	0.0026	0.001	mg/L	18-Aug-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	0.0091	0.0051	mg/L	18-Aug-20	EPA300.1

ReportDate: Friday, August 28, 2020

Print Date: *Friday, August 28, 2020*

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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.:

200522

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID:

Taiga Sample ID: 001

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### - DATA QUALIFIERS -

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*Data Qualifier Descriptions:*

- 55 *BOD result is inconclusive; residual DO was less than 1 mg/L. For evaluation purposes only.*
- 88 *Samples analysed past holding time, as per client request.*

**\* 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

ReportDate: Friday, August 28, 2020

Print Date: *Friday, August 28, 2020*

*Page 4 of 4*



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

**Taiga Batch No.:**  
**200553**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**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:** Monday, August 31, 2020

**Print Date:** *Monday, August 31, 2020*

*Page 1 of 4*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200553**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

Client Project: S18L3

Sample Type: Freshwater

Received Date: 11-Aug-20

Sampling Date: 10-Aug-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	20	2	mg/L	11-Aug-20	SM5210:B	
Nitrogen, Total	4.01	0.06	mg/L	14-Aug-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	25.3	0.5	mg/L	12-Aug-20	SM5310:B	
Phosphorous, Total	0.995	0.002	mg/L	18-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	327	0.4	µS/cm	11-Aug-20	SM2510:B	
pH	7.26		pH units	11-Aug-20	SM4500-H:B	
Solids, Total Suspended	104	3	mg/L	14-Aug-20	SM2540:D	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	55	1	CFU/100mL	11-Aug-20	SM9222:D	
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	17-Aug-20	EPA1664A	
Oil and Grease, visible	Non-visible			11-Aug-20	Visual Exam	
<b><u>Subcontracted Inorganics</u></b>						
Nitrate as Nitrogen	< 0.0200	0.020	mg/L	15-Aug-20	EPA300.1	

ReportDate: Monday, August 31, 2020

Print Date: **Monday, August 31, 2020**



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200553**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

Nitrite as N	< 0.0100	0.010	mg/L	15-Aug-20	EPA300.1
NO <sub>2</sub> +NO <sub>3</sub> - N	< 0.0220	0.022	mg/L	15-Aug-20	EPA300.1

ReportDate: Monday, August 31, 2020

Print Date: *Monday, August 31, 2020*

*Page 3 of 4*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:

**200553**

### - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **S18L3-003-(1)**

Taiga Sample ID: **001**

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**\* 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

ReportDate: Monday, August 31, 2020

Print Date: *Monday, August 31, 2020*

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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.:**  
**200599**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**Final report has been reviewed and approved by:**

---

**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.
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  - USEPA
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- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

**ReportDate:** Thursday, August 27, 2020

**Print Date:** *Thursday, August 27, 2020*

*Page 1 of 4*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200599**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 18-Aug-20

Sampling Date: 17-Aug-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	38	2	mg/L	19-Aug-20	SM5210:B	
Nitrogen, Total	3.32	0.06	mg/L	21-Aug-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	38.4	0.5	mg/L	21-Aug-20	SM5310:B	
Phosphorous, Total	1.06	0.002	mg/L	20-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	349	0.4	µS/cm	18-Aug-20	SM2510:B	
pH	7.24		pH units	18-Aug-20	SM4500-H:B	
Solids, Total Suspended	163	3	mg/L	24-Aug-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate+Nitrite as Nitrogen	0.10	0.01	mg/L	18-Aug-20	SM4110:B	
Nitrite as Nitrogen	0.04	0.01	mg/L	18-Aug-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	90	10	CFU/100mL	18-Aug-20	SM9222:D	
<b><u>Organics</u></b>						
Hexane Extractable Material	< 2.0	2.0	mg/L	21-Aug-20	EPA1664A	

ReportDate: Thursday, August 27, 2020

Print Date: **Thursday, August 27, 2020**

Page 2 of 4



**Taiga Environmental Laboratory**

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

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

**Taiga Batch No.:**  
**200599**

**- CERTIFICATE OF ANALYSIS -**

---

**Client Sample ID: S18L3-003-1**

**Taiga Sample ID: 001**

Oil and Grease, visible

Non-visible

18-Aug-20 Visual Exam

**ReportDate:** Thursday, August 27, 2020

**Print Date:** *Thursday, August 27, 2020*

*Page 3 of 4*



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

Taiga Batch No.:  
**200599**

**- CERTIFICATE OF ANALYSIS -**

---

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

---

**\* 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

ReportDate: Thursday, August 27, 2020

Print Date: *Thursday, August 27, 2020*

*Page 4 of 4*



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

**Taiga Batch No.:**  
**200649**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**Final report has been reviewed and approved by:**

---

**Glen Hudy**  
Quality Assurance Officer

---

**NOTES:**

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  - USEPA
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**ReportDate:** Wednesday, September 16, 2020

**Print Date:** *Wednesday, September 16, 2020*

*Page 1 of 10*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200649**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Client Project: S18L3

Sample Type: Freshwater

Received Date: 25-Aug-20

Sampling Date: 24-Aug-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	11	2	mg/L	26-Aug-20	SM5210:B	
Nitrogen, Total	2.62	0.06	mg/L	27-Aug-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	30.0	0.5	mg/L	28-Aug-20	SM5310:B	
Phosphorous, Total	0.529	0.002	mg/L	26-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO <sub>3</sub> )	139	0.4	mg/L	25-Aug-20	SM2320:B	
Conductivity, Specific (@25C)	349	0.4	µS/cm	25-Aug-20	SM2510:B	
pH	7.21		pH units	25-Aug-20	SM4500-H:B	
Solids, Total Suspended	33	3	mg/L	28-Aug-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.06	0.01	mg/L	26-Aug-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.09	0.01	mg/L	26-Aug-20	SM4110:B	
Nitrite as Nitrogen	0.04	0.01	mg/L	26-Aug-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	30	1	CFU/100mL	25-Aug-20	SM9222:D	

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*

Page 2 of 10



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

Taiga Batch No.:  
**200649**

**- CERTIFICATE OF ANALYSIS -**

---

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Organics

Hexane Extractable Material	2.5	2.0	mg/L	04-Sep-20	EPA1664A
Oil and Grease, visible	Non-visible			25-Aug-20	Visual Exam

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200649**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-2**

Taiga Sample ID: **002**

Client Project: S18L3

Sample Type: Freshwater

Received Date: 25-Aug-20

Sampling Date: 24-Aug-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	< 2	2	mg/L	26-Aug-20	SM5210:B	
Nitrogen, Total	0.81	0.06	mg/L	27-Aug-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	24.4	0.5	mg/L	28-Aug-20	SM5310:B	
Phosphorous, Total	0.076	0.002	mg/L	26-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	524	0.4	µS/cm	25-Aug-20	SM2510:B	
pH	7.46		pH units	25-Aug-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	28-Aug-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.09	0.01	mg/L	26-Aug-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.13	0.01	mg/L	26-Aug-20	SM4110:B	
Nitrite as Nitrogen	0.04	0.01	mg/L	26-Aug-20	SM4110:B	
Sulphate	76	1	mg/L	26-Aug-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	88	1	CFU/100mL	25-Aug-20	SM9222:D	
<b><u>Organics</u></b>						

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*





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

Taiga Batch No.:  
**200649**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-2**

Taiga Sample ID: **002**

Hexane Extractable Material	< 2.0	2.0	mg/L	04-Sep-20	EPA1664A
<b><u>Subcontracted Inorganics</u></b>					
Calcium	69.3	0.05	mg/L	02-Sep-20	EPA200.2
Magnesium	20.0	0.005	mg/L	02-Sep-20	EPA200.2
Potassium	2.11	0.05	mg/L	02-Sep-20	EPA200.2
Sodium	14.9	0.05	mg/L	02-Sep-20	EPA200.2
<b><u>Subcontracted Organics</u></b>					
Phenols, Total	< 0.0010	0.001	mg/L	03-Sep-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Arsenic	0.6	0.2	µg/L	01-Sep-20	EPA200.8
Cadmium	< 0.04	0.04	µg/L	01-Sep-20	EPA200.8
Chromium	< 0.1	0.1	µg/L	01-Sep-20	EPA200.8
Cobalt	< 0.1	0.1	µg/L	01-Sep-20	EPA200.8
Iron	71	5	ug/L	01-Sep-20	EPA200.8
Lead	< 0.1	0.1	µg/L	01-Sep-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	01-Sep-20	EPA200.8
Nickel	0.8	0.1	µg/L	01-Sep-20	EPA200.8
Silver	< 0.1	0.1	µg/L	01-Sep-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	01-Sep-20	EPA200.8
Zinc	0.9	0.4	µg/L	01-Sep-20	EPA200.8

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200649**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Client Project: S18L3

Sample Type: Freshwater

Received Date: 25-Aug-20

Sampling Date: 24-Aug-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	< 2	2	mg/L	26-Aug-20	SM5210:B	
Nitrogen, Total	0.84	0.06	mg/L	27-Aug-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	25.3	0.5	mg/L	28-Aug-20	SM5310:B	
Phosphorous, Total	0.010	0.002	mg/L	26-Aug-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	546	0.4	µS/cm	25-Aug-20	SM2510:B	
pH	8.16		pH units	25-Aug-20	SM4500-H:B	
Solids, Total Suspended	4	3	mg/L	28-Aug-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.10	0.01	mg/L	26-Aug-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.14	0.01	mg/L	26-Aug-20	SM4110:B	
Nitrite as Nitrogen	0.04	0.01	mg/L	26-Aug-20	SM4110:B	
Sulphate	92	1	mg/L	26-Aug-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	2	1	CFU/100mL	25-Aug-20	SM9222:D	
<b><u>Organics</u></b>						

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200649**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Hexane Extractable Material < 2.0 2.0 mg/L 04-Sep-20 EPA1664A

### Subcontracted Inorganics

Calcium 63.6 0.05 mg/L 02-Sep-20 EPA200.2

Magnesium 23.1 0.005 mg/L 02-Sep-20 EPA200.2

Potassium 1.36 0.05 mg/L 02-Sep-20 EPA200.2

Sodium 23.3 0.05 mg/L 02-Sep-20 EPA200.2

### Subcontracted Organics

Phenols, Total < 0.0010 0.001 mg/L 03-Sep-20 AB ENV.06537

### Trace Metals, Total

Arsenic 0.6 0.2 µg/L 01-Sep-20 EPA200.8

Cadmium < 0.04 0.04 µg/L 01-Sep-20 EPA200.8

Chromium < 0.1 0.1 µg/L 01-Sep-20 EPA200.8

Cobalt < 0.1 0.1 µg/L 01-Sep-20 EPA200.8

Iron 93 5 µg/L 01-Sep-20 EPA200.8

Lead < 0.1 0.1 µg/L 01-Sep-20 EPA200.8

Mercury < 0.01 0.01 µg/L 01-Sep-20 EPA200.8

Nickel 1.0 0.1 µg/L 01-Sep-20 EPA200.8

Silver < 0.1 0.1 µg/L 01-Sep-20 EPA200.8

Thallium < 0.1 0.1 µg/L 01-Sep-20 EPA200.8

Zinc 0.6 0.4 µg/L 01-Sep-20 EPA200.8

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200649**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(7) DISTRIBUTION**

Taiga Sample ID: **004**

Client Project: S18L3

Sample Type: Potable

Received Date: 25-Aug-20

Sampling Date: 24-Aug-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b><u>Subcontracted Organics</u></b>						
Bromodichloromethane	0.0046	0.001	mg/L	06-Sep-20	SW-846	
Bromoform	< 0.0050	0.005	mg/L	06-Sep-20	SW-846	
Chloroform	0.0444	0.001	mg/L	06-Sep-20	SW-846	
Dibromochloromethane	< 0.0010	0.001	mg/L	06-Sep-20	SW-846	
Trihalomethanes, Total	0.0490	0.005	mg/L	06-Sep-20	SW-846	

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200649**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(7) RETURN**

Taiga Sample ID: **005**

Client Project: S18L3

Sample Type: Potable

Received Date: 25-Aug-20

Sampling Date: 24-Aug-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b><u>Subcontracted Organics</u></b>						
Bromodichloromethane	0.0063	0.001	mg/L	06-Sep-20	SW-846	
Bromoform	< 0.0050	0.005	mg/L	06-Sep-20	SW-846	
Chloroform	0.0671	0.001	mg/L	06-Sep-20	SW-846	
Dibromochloromethane	< 0.0010	0.001	mg/L	06-Sep-20	SW-846	
Trihalomethanes, Total	0.0734	0.005	mg/L	06-Sep-20	SW-846	

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*

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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.:  
**200649**

### - CERTIFICATE OF ANALYSIS -

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Client Sample ID: **S18L3-003-(7) RETURN**

Taiga Sample ID: **005**

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**\* 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

ReportDate: Wednesday, September 16, 2020

Print Date: *Wednesday, September 16, 2020*

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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.:**  
**200807**

**- FINAL REPORT -**

---

**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

---

**Final report has been reviewed and approved by:**

A handwritten signature in black ink, appearing to read 'Glen Hudy', written over a horizontal line.

**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, October 16, 2020

**Print Date:** *Friday, October 16, 2020*

*Page 1 of 13*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200807**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Client Project: S18L3

Sample Type: Freshwater

Received Date: 23-Sep-20

Sampling Date: 22-Sep-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	13	2	mg/L	23-Sep-20	SM5210:B	
Nitrogen, Total	3.15	0.06	mg/L	26-Sep-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	27.0	0.5	mg/L	29-Sep-20	SM5310:B	
Phosphorous, Total	0.362	0.002	mg/L	25-Sep-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	366	0.4	µS/cm	24-Sep-20	SM2510:B	
pH	7.14		pH units	24-Sep-20	SM4500-H:B	
Solids, Total Suspended	26	3	mg/L	25-Sep-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.05	0.01	mg/L	24-Sep-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.11	0.01	mg/L	24-Sep-20	SM4110:B	
Nitrite as Nitrogen	0.06	0.01	mg/L	24-Sep-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	35	1	CFU/100mL	23-Sep-20	SM9222:D	
<b><u>Organics</u></b>						

ReportDate: Friday, October 16, 2020

Print Date: **Friday, October 16, 2020**

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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.:  
200807

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Oil and Grease, visible	Non-visible			23-Sep-20	Visual Exam
<b><u>Subcontracted Organics</u></b>					
Hexane Extractable Material	< 5.0	5	mg/L	16-Oct-20	APHA 5520B
Phenols, Total	< 0.0010	0.001	mg/L	29-Sep-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	10.1	5	µg/L	30-Sep-20	EPA200.8
Antimony	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Arsenic	0.6	0.2	µg/L	30-Sep-20	EPA200.8
Barium	48.2	0.1	µg/L	30-Sep-20	EPA200.8
Beryllium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Bismuth	< 0.2	0.2	µg/L	30-Sep-20	EPA200.8
Boron	30.9	0.9	µg/L	30-Sep-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Cesium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Chromium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Cobalt	0.2	0.1	µg/L	30-Sep-20	EPA200.8
Copper	0.6	0.2	µg/L	30-Sep-20	EPA200.8
Iron	277	5	µg/L	30-Sep-20	EPA200.8
Lead	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Lithium	3.1	0.2	µg/L	30-Sep-20	EPA200.8
Manganese	198	0.1	µg/L	30-Sep-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	30-Sep-20	EPA200.8
Molybdenum	0.5	0.1	µg/L	30-Sep-20	EPA200.8
Nickel	1.3	0.1	µg/L	30-Sep-20	EPA200.8
Rubidium	2.3	0.1	µg/L	30-Sep-20	EPA200.8

ReportDate: Friday, October 16, 2020

Print Date: *Friday, October 16, 2020*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200807**

### - CERTIFICATE OF ANALYSIS -

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Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Selenium	< 0.5	0.5	µg/L	30-Sep-20	EPA200.8
Silver	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Strontium	163	0.1	µg/L	30-Sep-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Tin	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Titanium	0.2	0.1	µg/L	30-Sep-20	EPA200.8
Uranium	0.1	0.1	µg/L	30-Sep-20	EPA200.8
Vanadium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Zinc	< 5.0	5	µg/L	30-Sep-20	EPA200.8

ReportDate: Friday, October 16, 2020

Print Date: *Friday, October 16, 2020*

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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.:  
200807

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-2**

Taiga Sample ID: **002**

Client Project: S18L3  
Sample Type: Freshwater  
Received Date: 23-Sep-20  
Sampling Date: 22-Sep-20  
Sampling Time: 11:00  
Location: Norman Wells  
Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	2	2	mg/L	23-Sep-20	SM5210:B	
Nitrogen, Total	0.72	0.06	mg/L	26-Sep-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	20.3	0.5	mg/L	29-Sep-20	SM5310:B	
Phosphorous, Total	0.039	0.002	mg/L	25-Sep-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	623	0.4	µS/cm	24-Sep-20	SM2510:B	
pH	7.49		pH units	24-Sep-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	25-Sep-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.09	0.01	mg/L	25-Sep-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.20	0.01	mg/L	25-Sep-20	SM4110:B	
Nitrite as Nitrogen	0.11	0.01	mg/L	25-Sep-20	SM4110:B	
Sulphate	121	1	mg/L	25-Sep-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	6	1	CFU/100mL	23-Sep-20	SM9222:D	
<b><u>Subcontracted Inorganics</u></b>						

ReportDate: Friday, October 16, 2020  
Print Date: *Friday, October 16, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200807**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-2**

Taiga Sample ID: **002**

Calcium	84.4	0.05	mg/L	29-Sep-20	EPA200.2
Magnesium	24.8	0.005	mg/L	29-Sep-20	EPA200.2
Potassium	2.23	0.05	mg/L	29-Sep-20	EPA200.2
Sodium	18.6	0.05	mg/L	29-Sep-20	EPA200.2
<b><u>Subcontracted Organics</u></b>					
Hexane Extractable Material	< 5.0	5	mg/L	16-Oct-20	APHA 5520B
Phenols, Total	< 0.0010	0.001	mg/L	29-Sep-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	7.8	5	µg/L	30-Sep-20	EPA200.8
Antimony	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Arsenic	0.5	0.2	µg/L	30-Sep-20	EPA200.8
Barium	51.0	0.1	µg/L	30-Sep-20	EPA200.8
Beryllium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Bismuth	< 0.2	0.2	µg/L	30-Sep-20	EPA200.8
Boron	8.4	0.9	µg/L	30-Sep-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Cesium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Chromium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Cobalt	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Copper	0.9	0.2	µg/L	30-Sep-20	EPA200.8
Iron	62	5	µg/L	30-Sep-20	EPA200.8
Lead	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Lithium	7.3	0.2	µg/L	30-Sep-20	EPA200.8
Manganese	17.9	0.1	µg/L	30-Sep-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	30-Sep-20	EPA200.8

ReportDate: Friday, October 16, 2020

Print Date: *Friday, October 16, 2020*



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

Taiga Batch No.:  
**200807**

**- CERTIFICATE OF ANALYSIS -**

**Client Sample ID: S18L3-003-2**

**Taiga Sample ID: 002**

Molybdenum	0.7	0.1	µg/L	30-Sep-20	EPA200.8
Nickel	0.7	0.1	µg/L	30-Sep-20	EPA200.8
Rubidium	1.0	0.1	µg/L	30-Sep-20	EPA200.8
Selenium	< 0.5	0.5	µg/L	30-Sep-20	EPA200.8
Silver	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Strontium	224	0.1	µg/L	30-Sep-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Tin	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Titanium	0.1	0.1	µg/L	30-Sep-20	EPA200.8
Uranium	0.7	0.1	µg/L	30-Sep-20	EPA200.8
Vanadium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Zinc	< 5.0	5	µg/L	30-Sep-20	EPA200.8

**ReportDate:** Friday, October 16, 2020  
**Print Date:** *Friday, October 16, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
200807

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Client Project: S18L3

Sample Type: Freshwater

Received Date: 23-Sep-20

Sampling Date: 22-Sep-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b><u>Inorganics - Nutrients</u></b>						
CBOD	2	2	mg/L	23-Sep-20	SM5210:B	
Nitrogen, Total	0.77	0.06	mg/L	26-Sep-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	22.6	0.5	mg/L	29-Sep-20	SM5310:B	
Phosphorous, Total	0.003	0.002	mg/L	25-Sep-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	601	0.4	µS/cm	24-Sep-20	SM2510:B	
pH	8.13		pH units	24-Sep-20	SM4500-H:B	
Solids, Total Suspended	9	3	mg/L	25-Sep-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.08	0.01	mg/L	24-Sep-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.13	0.01	mg/L	24-Sep-20	SM4110:B	
Nitrite as Nitrogen	0.06	0.01	mg/L	24-Sep-20	SM4110:B	
Sulphate	91	1	mg/L	24-Sep-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	2	1	CFU/100mL	23-Sep-20	SM9222:D	
<b><u>Subcontracted Inorganics</u></b>						

ReportDate: Friday, October 16, 2020

Print Date: *Friday, October 16, 2020*



# Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
**200807**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Calcium	63.7	0.05	mg/L	29-Sep-20	EPA200.2
Magnesium	23.7	0.005	mg/L	29-Sep-20	EPA200.2
Potassium	1.45	0.05	mg/L	29-Sep-20	EPA200.2
Sodium	36.8	0.05	mg/L	29-Sep-20	EPA200.2
<b><u>Subcontracted Organics</u></b>					
Hexane Extractable Material	< 5.0	5	mg/L	16-Oct-20	APHA 5520B
Phenols, Total	< 0.0010	0.001	mg/L	29-Sep-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	8.0	5	µg/L	30-Sep-20	EPA200.8
Antimony	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Arsenic	0.5	0.2	µg/L	30-Sep-20	EPA200.8
Barium	42.7	0.1	µg/L	30-Sep-20	EPA200.8
Beryllium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Bismuth	< 0.2	0.2	µg/L	30-Sep-20	EPA200.8
Boron	8.6	0.9	µg/L	30-Sep-20	EPA200.8
Cadmium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Cesium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Chromium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Cobalt	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Copper	0.3	0.2	µg/L	30-Sep-20	EPA200.8
Iron	69	5	µg/L	30-Sep-20	EPA200.8
Lead	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Lithium	13.3	0.2	µg/L	30-Sep-20	EPA200.8
Manganese	5.6	0.1	µg/L	30-Sep-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	30-Sep-20	EPA200.8

ReportDate: Friday, October 16, 2020

Print Date: *Friday, October 16, 2020*



# Taiga Environmental Laboratory

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

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

**Taiga Batch No.:**  
**200807**

## - CERTIFICATE OF ANALYSIS -

**Client Sample ID: S18L3-003-3**

**Taiga Sample ID: 003**

Molybdenum	0.7	0.1	µg/L	30-Sep-20	EPA200.8
Nickel	0.8	0.1	µg/L	30-Sep-20	EPA200.8
Rubidium	0.5	0.1	µg/L	30-Sep-20	EPA200.8
Selenium	< 0.5	0.5	µg/L	30-Sep-20	EPA200.8
Silver	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Strontium	191	0.1	µg/L	30-Sep-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Tin	< 0.1	0.1	µg/L	30-Sep-20	EPA200.8
Titanium	0.1	0.1	µg/L	30-Sep-20	EPA200.8
Uranium	0.8	0.1	µg/L	30-Sep-20	EPA200.8
Vanadium	0.2	0.1	µg/L	30-Sep-20	EPA200.8
Zinc	< 5.0	5	µg/L	30-Sep-20	EPA200.8

**ReportDate:** Friday, October 16, 2020

**Print Date:** *Friday, October 16, 2020*

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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.:  
**200807**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-(7) DISTRIBUTION**

Taiga Sample ID: **004**

Client Project: S18L3-003

Sample Type: Potable

Received Date: 23-Sep-20

Sampling Date: 22-Sep-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b>Organics</b>						
Bromodichloromethane	0.005	0.005	mg/L	23-Sep-20	EPA8260B	
Bromoform	< 0.005	0.005	mg/L	23-Sep-20	EPA8260B	
Chloroform	0.050	0.005	mg/L	23-Sep-20	EPA8260B	
Dibromochloromethane	< 0.005	0.005	mg/L	23-Sep-20	EPA8260B	
Trihalomethanes, Total	0.056	0.005	mg/L	23-Sep-20	EPA8260B	

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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.:  
**200807**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-7 Return**

Taiga Sample ID: **005**

Client Project: S18L3-003

Sample Type: Potable

Received Date: 23-Sep-20

Sampling Date: 22-Sep-20

Sampling Time: 11:00

Location: Norman Wells

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<b>Organics</b>						
Bromodichloromethane	0.005	0.005	mg/L	23-Sep-20	EPA8260B	
Bromoform	< 0.005	0.005	mg/L	23-Sep-20	EPA8260B	
Chloroform	0.050	0.005	mg/L	23-Sep-20	EPA8260B	
Dibromochloromethane	< 0.005	0.005	mg/L	23-Sep-20	EPA8260B	
Trihalomethanes, Total	0.055	0.005	mg/L	23-Sep-20	EPA8260B	

ReportDate: Friday, October 16, 2020

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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.:**

**200807**

### - CERTIFICATE OF ANALYSIS -

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**Client Sample ID: S18L3-003-7 Return**

**Taiga Sample ID: 005**

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

**Taiga Batch No.:**  
**200847**

**- FINAL REPORT -**

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**Prepared For:** Town of Norman Wells

**Address:** Box 5  
Norman Wells, NT  
X0E 0V0

**Attn:** Hugo Pabke

**Facsimile:** (867) 587-3724

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**Final report has been reviewed and approved by:**

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**Glen Hudy**  
Quality Assurance Officer

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**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:** Tuesday, October 20, 2020

**Print Date:** *Tuesday, October 20, 2020*



## Taiga Environmental Laboratory

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

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

Taiga Batch No.:  
200847

### - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

Client Project: S18L3-003

Sample Type: Freshwater

Received Date: 02-Oct-20

Sampling Date: 01-Oct-20

Sampling Time: 11:30

Location:

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	7	2	mg/L	02-Oct-20	SM5210:B	
Nitrogen, Total	2.43	0.06	mg/L	05-Oct-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	23.7	0.5	mg/L	06-Oct-20	SM5310:B	
Phosphorous, Total	0.179	0.002	mg/L	05-Oct-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO <sub>3</sub> )	132	0.4	mg/L	02-Oct-20	SM2320:B	
Conductivity, Specific (@25C)	364	0.4	µS/cm	02-Oct-20	SM2510:B	
pH	7.26		pH units	02-Oct-20	SM4500-H:B	
Solids, Total Suspended	8	3	mg/L	05-Oct-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.07	0.01	mg/L	05-Oct-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.09	0.01	mg/L	05-Oct-20	SM4110:B	
Nitrite as Nitrogen	0.02	0.01	mg/L	05-Oct-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	6	1	CFU/100mL	02-Oct-20	SM9222:D	

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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.:

**200847**

### - CERTIFICATE OF ANALYSIS -

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Client Sample ID: **S18L3-003-1**

Taiga Sample ID: **001**

#### Organics

Oil and Grease, visible	Non-visible	02-Oct-20	Visual Exam
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#### Subcontracted Organics

Hexane Extractable Material	< 5.0	5	mg/L	13-Oct-20	APHA 5520B
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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.:  
**200847**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-2**

Taiga Sample ID: **002**

Client Project: S18L3-003  
Sample Type: Freshwater  
Received Date: 02-Oct-20  
Sampling Date: 01-Oct-20  
Sampling Time: 11:30

Location:

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	3	2	mg/L	02-Oct-20	SM5210:B	
Nitrogen, Total	0.62	0.06	mg/L	05-Oct-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	17.6	0.5	mg/L	06-Oct-20	SM5310:B	
Phosphorous, Total	0.033	0.002	mg/L	05-Oct-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	669	0.4	µS/cm	02-Oct-20	SM2510:B	
pH	7.63		pH units	02-Oct-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	05-Oct-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.17	0.01	mg/L	05-Oct-20	SM4110:B	
Nitrite as Nitrogen	< 0.01	0.01	mg/L	05-Oct-20	SM4110:B	
Sulphate	153	1	mg/L	05-Oct-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	6	1	CFU/100mL	02-Oct-20	SM9222:D	
<b><u>Subcontracted Inorganics</u></b>						
Calcium	95.0	0.05	mg/L	12-Oct-20	EPA200.2	

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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.:  
**200847**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-2**

Taiga Sample ID: **002**

Magnesium	28.1	0.005	mg/L	12-Oct-20	EPA200.2
Potassium	2.01	0.05	mg/L	12-Oct-20	EPA200.2
Sodium	18.8	0.05	mg/L	12-Oct-20	EPA200.2
<b><u>Subcontracted Organics</u></b>					
Hexane Extractable Material	< 5.0	5	mg/L	13-Oct-20	APHA 5520B
Phenols, Total	< 0.0010	0.001	mg/L	13-Oct-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Arsenic	0.4	0.2	µg/L	13-Oct-20	EPA200.8
Cadmium	< 0.04	0.04	µg/L	13-Oct-20	EPA200.8
Chromium	< 0.1	0.1	µg/L	13-Oct-20	EPA200.8
Copper	< 0.2	0.2	µg/L	13-Oct-20	EPA200.8
Iron	35	5	ug/L	13-Oct-20	EPA200.8
Lead	< 0.1	0.1	µg/L	13-Oct-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	13-Oct-20	EPA200.8
Nickel	0.6	0.1	µg/L	13-Oct-20	EPA200.8
Silver	< 0.1	0.1	µg/L	13-Oct-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	13-Oct-20	EPA200.8
Zinc	1.2	0.4	µg/L	13-Oct-20	EPA200.8

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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.:  
**200847**

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Client Project: S18L3-003  
Sample Type: Freshwater  
Received Date: 02-Oct-20  
Sampling Date: 01-Oct-20  
Sampling Time: 11:30

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
CBOD	2	2	mg/L	02-Oct-20	SM5210:B	
Nitrogen, Total	0.23	0.06	mg/L	05-Oct-20	ISO/TR 11905:1997(E)	
Organic Carbon, Total	20.3	0.5	mg/L	06-Oct-20	SM5310:B	
Phosphorous, Total	0.006	0.002	mg/L	05-Oct-20	SM4500-P:D	
<b><u>Inorganics - Physicals</u></b>						
Conductivity, Specific (@25C)	646	0.4	µS/cm	02-Oct-20	SM2510:B	
pH	8.14		pH units	02-Oct-20	SM4500-H:B	
Solids, Total Suspended	< 3	3	mg/L	05-Oct-20	SM2540:D	
<b><u>Major Ions</u></b>						
Nitrate as Nitrogen	0.12	0.01	mg/L	05-Oct-20	SM4110:B	
Nitrate+Nitrite as Nitrogen	0.13	0.01	mg/L	05-Oct-20	SM4110:B	
Nitrite as Nitrogen	0.01	0.01	mg/L	05-Oct-20	SM4110:B	
Sulphate	109	1	mg/L	05-Oct-20	SM4110:B	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	1	1	CFU/100mL	02-Oct-20	SM9222:D	
<b><u>Subcontracted Inorganics</u></b>						

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Print Date: *Tuesday, October 20, 2020*



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

Taiga Batch No.:  
**200847**

**- CERTIFICATE OF ANALYSIS -**

Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

Calcium	75.3	0.05	mg/L	12-Oct-20	EPA200.2
Magnesium	26.6	0.005	mg/L	12-Oct-20	EPA200.2
Potassium	1.38	0.05	mg/L	12-Oct-20	EPA200.2
Sodium	35.9	0.05	mg/L	12-Oct-20	EPA200.2
<b><u>Subcontracted Organics</u></b>					
Hexane Extractable Material	< 5.0	5	mg/L	13-Oct-20	APHA 5520B
Phenols, Total	< 0.0010	0.001	mg/L	13-Oct-20	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Arsenic	0.4	0.2	µg/L	13-Oct-20	EPA200.8
Cadmium	< 0.04	0.04	µg/L	13-Oct-20	EPA200.8
Chromium	< 0.1	0.1	µg/L	13-Oct-20	EPA200.8
Copper	0.7	0.2	µg/L	13-Oct-20	EPA200.8
Iron	61	5	ug/L	13-Oct-20	EPA200.8
Lead	< 0.1	0.1	µg/L	13-Oct-20	EPA200.8
Mercury	< 0.01	0.01	µg/L	13-Oct-20	EPA200.8
Nickel	0.8	0.1	µg/L	13-Oct-20	EPA200.8
Silver	< 0.1	0.1	µg/L	13-Oct-20	EPA200.8
Thallium	< 0.1	0.1	µg/L	13-Oct-20	EPA200.8
Zinc	0.5	0.4	µg/L	13-Oct-20	EPA200.8

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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.:

**200847**

### - CERTIFICATE OF ANALYSIS -

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Client Sample ID: **S18L3-003-3**

Taiga Sample ID: **003**

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**\* 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

ReportDate: Tuesday, October 20, 2020

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