



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-765-6645 Fax: (867)-873-2652

Taiga Batch No.:
150854

- FINAL REPORT -

Prepared For: Community Government of Behchoko

Address: P.O. Box 68
Behchoko, NT
X0E 0Y0

Attn: Galvin Simpson

Facsimile: (867) 392-6967

Final report has been reviewed and approved by:

Judy Mah
Client Service 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.

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Taiga Batch No.:
150854

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **R2**

Taiga Sample ID: **001**

Client Project:

Sample Type: Sewage

Received Date: 17-Sep-15

Sampling Date: 17-Sep-15

Sampling Time: 11:30

Location: Rae Lagoon

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	12.0	0.005	mg/L	22-Sep-15	SM4500-NH3:G	
Biochemical Oxygen Demand	10	2	mg/L	18-Sep-15	SM5210:B	81
Chemical Oxygen Demand	90	5	mg/L	18-Sep-15	SM5220:D	
Phosphorous, Total	8.69	0.002	mg/L	29-Sep-15	SM4500-P:D	
<u>Inorganics - Physicals</u>						
pH	8.51		pH units	17-Sep-15	SM4500-H:B	
Solids, Total Suspended	25	3	mg/L	23-Sep-15	SM2540:D	
<u>Microbiology</u>						
Coliforms, Fecal	520	10	CFU/100mL	18-Sep-15	SM9222:D	
<u>Trace Metals, Total</u>						
Aluminum	422	5	µg/L	26-Sep-15	EPA200.8	
Antimony	0.2	0.1	µg/L	26-Sep-15	EPA200.8	
Arsenic	2.6	0.2	µg/L	26-Sep-15	EPA200.8	
Barium	67.8	0.1	µg/L	26-Sep-15	EPA200.8	
Beryllium	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8	

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Taiga Sample ID: **001**

Cadmium	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8
Cesium	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8
Chromium	1.0	0.1	µg/L	26-Sep-15	EPA200.8
Cobalt	1.1	0.1	µg/L	26-Sep-15	EPA200.8
Copper	5.5	0.2	µg/L	26-Sep-15	EPA200.8
Iron	972	5	µg/L	26-Sep-15	EPA200.8
Lead	1.5	0.1	µg/L	26-Sep-15	EPA200.8
Lithium	8.3	0.2	µg/L	26-Sep-15	EPA200.8
Manganese	426	0.1	µg/L	26-Sep-15	EPA200.8
Molybdenum	0.5	0.1	µg/L	26-Sep-15	EPA200.8
Nickel	3.3	0.1	µg/L	26-Sep-15	EPA200.8
Rubidium	22.5	0.1	µg/L	26-Sep-15	EPA200.8
Selenium	< 0.5	0.5	µg/L	26-Sep-15	EPA200.8
Silver	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8
Strontium	104	0.1	µg/L	26-Sep-15	EPA200.8
Thallium	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8
Titanium	15.8	0.1	µg/L	26-Sep-15	EPA200.8
Uranium	0.6	0.1	µg/L	26-Sep-15	EPA200.8
Vanadium	1.5	0.1	µg/L	26-Sep-15	EPA200.8
Zinc	37.3	5	µg/L	26-Sep-15	EPA200.8

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Taiga Batch No.:
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- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RWTP Sludge**

Taiga Sample ID: **002**

Client Project:

Sample Type: Sludge
Received Date: 17-Sep-15
Sampling Date: 17-Sep-15
Sampling Time: 11:30

Location: RWTP
Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	1.85	0.005	mg/L	22-Sep-15	SM4500-NH3:G	
Biochemical Oxygen Demand	27	2	mg/L	18-Sep-15	SM5210:B	81
CBOD	20	2	mg/L	18-Sep-15	SM5210:B	81
Chemical Oxygen Demand	1580	500	mg/L	18-Sep-15	SM5220:D	
Organic Carbon, Dissolved	7.6	0.5	mg/L	24-Sep-15	SM5310:B	
Organic Carbon, Total	224	0.5	mg/L	25-Sep-15	SM5310:B	
Phosphorous, Total	1.36	0.002	mg/L	29-Sep-15	SM4500-P:D	
<u>Inorganics - Physicals</u>						
Conductivity, Specific (@25C)	263	0.4	µS/cm	17-Sep-15	SM2510:B	
pH	6.39		pH units	17-Sep-15	SM4500-H:B	
Solids, Total Suspended	10400	3	mg/L	23-Sep-15	SM2540:D	
<u>Major Ions</u>						
Calcium	17.1	0.1	mg/L	17-Sep-15	SM4110:B	
Chloride	1.6	0.7	mg/L	17-Sep-15	SM4110:B	
Fluoride	0.5	0.1	mg/L	17-Sep-15	SM4110:B	
Magnesium	8.4	0.1	mg/L	17-Sep-15	SM4110:B	

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- CERTIFICATE OF ANALYSIS -

Client Sample ID: RWTP Sludge

Taiga Sample ID: 002

Nitrate as Nitrogen	0.16	0.01	mg/L	17-Sep-15	SM4110:B
Nitrite as Nitrogen	< 0.01	0.01	mg/L	17-Sep-15	SM4110:B
Potassium	1.5	0.1	mg/L	17-Sep-15	SM4110:B
Sodium	17.1	0.1	mg/L	17-Sep-15	SM4110:B
Sulphate	82	1	mg/L	17-Sep-15	SM4110:B

Microbiology

Coliforms, Fecal	100	100	CFU/100mL	18-Sep-15	SM9222:D
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Subcontracted Nutrients

Kjeldahl Nitrogen, Total	32.1	0.05	mg/L	05-Oct-15	APHA4500-NORG (T
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Trace Metals, Total

Aluminum	943000	5	µg/L	26-Sep-15	EPA200.8
Antimony	0.2	0.1	µg/L	26-Sep-15	EPA200.8
Arsenic	16.0	0.2	µg/L	26-Sep-15	EPA200.8
Barium	469	0.1	µg/L	26-Sep-15	EPA200.8
Beryllium	1.4	0.1	µg/L	26-Sep-15	EPA200.8
Cadmium	0.2	0.1	µg/L	26-Sep-15	EPA200.8
Cesium	4.3	0.1	µg/L	26-Sep-15	EPA200.8
Chromium	73.3	0.1	µg/L	26-Sep-15	EPA200.8
Cobalt	18.9	0.1	µg/L	26-Sep-15	EPA200.8
Copper	99.9	0.2	µg/L	26-Sep-15	EPA200.8
Iron	41100	5	µg/L	26-Sep-15	EPA200.8
Lead	17.6	0.1	µg/L	26-Sep-15	EPA200.8
Lithium	104	0.2	µg/L	26-Sep-15	EPA200.8
Manganese	1110	0.1	µg/L	26-Sep-15	EPA200.8
Molybdenum	2.8	0.1	µg/L	26-Sep-15	EPA200.8

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Nickel	64.5	0.1	µg/L	26-Sep-15	EPA200.8
Rubidium	60.8	0.1	µg/L	26-Sep-15	EPA200.8
Selenium	2.3	0.5	µg/L	26-Sep-15	EPA200.8
Silver	0.3	0.1	µg/L	26-Sep-15	EPA200.8
Strontium	204	0.1	µg/L	26-Sep-15	EPA200.8
Thallium	0.5	0.1	µg/L	26-Sep-15	EPA200.8
Titanium	1190	0.1	µg/L	26-Sep-15	EPA200.8
Uranium	17.2	0.1	µg/L	26-Sep-15	EPA200.8
Vanadium	80.4	0.1	µg/L	26-Sep-15	EPA200.8
Zinc	97.7	5	µg/L	26-Sep-15	EPA200.8

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150854

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **R3**

Taiga Sample ID: **003**

Client Project:

Sample Type: Sewage
Received Date: 17-Sep-15
Sampling Date: 17-Sep-15
Sampling Time: 11:30
Location: Rae Lagoon

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	1.75	0.005	mg/L	22-Sep-15	SM4500-NH3:G	
Biochemical Oxygen Demand	6	2	mg/L	18-Sep-15	SM5210:B	
Chemical Oxygen Demand	69	5	mg/L	18-Sep-15	SM5220:D	
Phosphorous, Total	2.18	0.002	mg/L	29-Sep-15	SM4500-P:D	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO3)	290	0.4	mg/L	17-Sep-15	SM2320:B	
pH	7.13		pH units	17-Sep-15	SM4500-H:B	
Solids, Total Suspended	73	3	mg/L	23-Sep-15	SM2540:D	
<u>Microbiology</u>						
Coliforms, Fecal	< 1	1	CFU/100mL	18-Sep-15	SM9222:D	
<u>Trace Metals, Total</u>						
Aluminum	103	5	µg/L	26-Sep-15	EPA200.8	
Antimony	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8	
Arsenic	4.6	0.2	µg/L	26-Sep-15	EPA200.8	
Barium	65.9	0.1	µg/L	26-Sep-15	EPA200.8	
Beryllium	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8	

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Taiga Sample ID: **003**

Cadmium	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8
Cesium	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8
Chromium	0.3	0.1	µg/L	26-Sep-15	EPA200.8
Cobalt	1.7	0.1	µg/L	26-Sep-15	EPA200.8
Copper	1.3	0.2	µg/L	26-Sep-15	EPA200.8
Iron	5670	5	µg/L	26-Sep-15	EPA200.8
Lead	0.2	0.1	µg/L	26-Sep-15	EPA200.8
Lithium	12.2	0.2	µg/L	26-Sep-15	EPA200.8
Manganese	942	0.1	µg/L	26-Sep-15	EPA200.8
Molybdenum	1.7	0.1	µg/L	26-Sep-15	EPA200.8
Nickel	2.1	0.1	µg/L	26-Sep-15	EPA200.8
Rubidium	7.1	0.1	µg/L	26-Sep-15	EPA200.8
Selenium	< 0.5	0.5	µg/L	26-Sep-15	EPA200.8
Silver	0.1	0.1	µg/L	26-Sep-15	EPA200.8
Strontium	296	0.1	µg/L	26-Sep-15	EPA200.8
Thallium	< 0.1	0.1	µg/L	26-Sep-15	EPA200.8
Titanium	2.1	0.1	µg/L	26-Sep-15	EPA200.8
Uranium	11.7	0.1	µg/L	26-Sep-15	EPA200.8
Vanadium	1.7	0.1	µg/L	26-Sep-15	EPA200.8
Zinc	1110	5	µg/L	26-Sep-15	EPA200.8

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- DATA QUALIFIERS -

Data Qualifier Descriptions:

81 *Results are inconclusive due to insufficient depletion of sample, minimum 2 mg/L required over 5 days.*

*** 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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